

1           IN THE UNITED STATES DISTRICT COURT  
          FOR THE NORTHERN DISTRICT OF OHIO  
2           EASTERN DIVISION

3       IN RE:    NATIONAL                                 :   HON. DAN A.  
          PRESCRIPTION OPIATE                         :   POLSTER  
4       LITIGATION                                       :   MDL NO. 2804

5 This document relates to: : Case No. 17-MD-2804

6 The County of Summit, Ohio :  
Ohio et al. v. Purdue Pharma :  
7 L.P., et al., Case No. :  
17-OP-45004 :

9 The County of Cuyahoga v. :  
Purdue Pharma Purdue Pharma :  
L.P., et al., Case No. :  
0 18-OP-45090 :

11 - - -  
12 - HIGHLY CONFIDENTIAL -  
SUBJECT TO FURTHER CONFIDENTIALITY REVIEW

VOLUME I

14 - - -  
May 9, 2019

16 Videotaped deposition of  
CRAIG J. McCANN, Ph.D., CFA, taken  
17 pursuant to notice, was held at the law  
offices of Morgan Lewis & Bockius, LLP,  
18 1111 Pennsylvania Avenue, NW, Washington,  
D.C., beginning at 10:03 a.m., on the  
19 above date, before Michelle L. Gray, a  
Registered Professional Reporter,  
20 Certified Shorthand Reporter, Certified  
Realtime Reporter, and Notary Public.

22 GOLKOW LITIGATION SERVICES  
23 877.370.3377 ph | 917.591.5672 fax  
deps@golkow.com

| Page 2  | Page 4  |
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5 Testimony of:

6 CRAIG J. McCANN, Ph.D., CFA

7 By Ms. McEnroe 16  
8 By Mr. Eppich 253  
9 By Mr. Boehm 323  
10  
11

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| 20          | Supplemental Report A through F Appendices |      |
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| 22          | Appendices 1 and 2 & Attachment            |      |
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17 (Levin Papantonio - via telephone)  
18 Lora Chafin, Paralegal  
19 (Greene Ketchum - via telephone)  
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21 Amy Kennedy, Paralegal  
22 (Weisman Kennedy - via telephone)  
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24 VIDEOTAPE TECHNICIAN:  
Devyn Mulholland

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|---|--|
| <p style="text-align: right;">Page 14</p> <p>1                   - - -</p> <p>2                   DEPOSITION SUPPORT INDEX</p> <p>3                   - - -</p> <p>4</p> <p>5 Direction to Witness Not to Answer</p> <p>6 PAGE LINE</p> <p>7 None.</p> <p>8 Request for Production of Documents</p> <p>9 PAGE LINE</p> <p>10 None.</p> <p>11 Stipulations</p> <p>12 PAGE LINE</p> <p>13 None.</p> <p>14 Questions Marked</p> <p>15 PAGE LINE</p> <p>16 None.</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p>  | <p style="text-align: right;">Page 16</p> <p>1                   EXAMINATION</p> <p>2                   - - -</p> <p>3 BY MS. McENROE:</p> <p>4           Q. Good morning, Dr. McCann.</p> <p>5           A. Good morning.</p> <p>6           Q. My name is Elisa McEnroe.</p> <p>7 I'm counsel for Rite Aid of Maryland,</p> <p>8 Inc., doing business as Mid-Atlantic</p> <p>9 Customer Support Center. Just call that</p> <p>10 Rite Aid. I'll be asking you questions</p> <p>11 this morning. You've been deposed</p> <p>12 before, correct?</p> <p>13          A. Yes.</p> <p>14          Q. And you are here as an</p> <p>15 expert witness on behalf of the</p> <p>16 plaintiffs in the National Prescription</p> <p>17 Opiate Litigation; is that correct?</p> <p>18          A. Yes.</p> <p>19          Q. You've submitted a number of</p> <p>20 reports in this matter, correct?</p> <p>21          A. Yes.</p> <p>22          Q. An initial report on</p> <p>23 March 25th and two supplemental reports</p> <p>24 thereafter?</p>                  |
| <p style="text-align: right;">Page 15</p> <p>1                   - - -</p> <p>2                   THE VIDEOGRAPHER: We are</p> <p>3 now on the record. My name is</p> <p>4 Devyn Mulholland. I'm a</p> <p>5 videographer with Golkow</p> <p>6 Litigation Services.</p> <p>7 Today's date is May 9, 2019.</p> <p>8 The time is 10:03 a.m.</p> <p>9 This video deposition is</p> <p>10 being held in Washington DC, in</p> <p>11 the matter of National</p> <p>12 Prescription Opiate Litigation.</p> <p>13 The deponent is Craig J.</p> <p>14 McCann.</p> <p>15 Counsel will be noted on the</p> <p>16 stenographic record.</p> <p>17 The court reporter is</p> <p>18 Michelle Gray and will now swear</p> <p>19 in the witness.</p> <p>20                   - - -</p> <p>21 ... CRAIG J. McCANN, Ph.D., CFA,</p> <p>22 having been first duly sworn, was</p> <p>23 examined and testified as follows:</p> <p>24                   - - -</p> | <p style="text-align: right;">Page 17</p> <p>1           A. Yes.</p> <p>2           Q. You understand that you're</p> <p>3 appearing here today pursuant to a</p> <p>4 deposition notice?</p> <p>5           A. Yes.</p> <p>6           Q. I'd like to hand you what</p> <p>7 I've marked as Exhibit 1.</p> <p>8           (Document marked for</p> <p>9 identification as Exhibit</p> <p>10 McCann-1.)</p> <p>11           THE WITNESS: Thank you.</p> <p>12 BY MS. McENROE:</p> <p>13          Q. And this is a copy of that</p> <p>14 deposition notice, correct?</p> <p>15          A. Yes.</p> <p>16          Q. So I know you've been</p> <p>17 deposed a number of times before. Just a</p> <p>18 couple quick reminders as we get going.</p> <p>19 Especially for this litigation, we're</p> <p>20 quite pressed for time, although we have</p> <p>21 two days with you, 14 hours. So a number</p> <p>22 of different counsel are going to ask you</p> <p>23 questions through the two days. And</p> <p>24 you're going to see that we're going to</p> |



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1 try and move things along pretty  
2 expeditiously. So we ask that you help  
3 us cooperate with that.

4 Of course we want you to get  
5 complete answers as intended on the  
6 record, but just so you understand  
7 upfront, there will be some sensitivity  
8 to the time throughout the two days.

9 Do you understand that?

10 A. I do.

11 Q. And you're here to answer  
12 our questions and hopefully we won't  
13 speak over one another. I ask that you  
14 let me finish my questions and I will do  
15 my best to let you finish your answers.  
16 You understand?

17 A. I will. I do. Thank you.

18 Q. And if you ever need a  
19 break, just let us know. My only request  
20 is that you finish any question that  
21 is -- you answer any question that is  
22 pending at the time of the break. All  
23 right?

24 A. Yes.

Page 19

1 Q. One last thing is, if you  
2 don't speak up, I'm going to assume that  
3 you understand my question. So if you  
4 don't understand it, and especially when  
5 we get into some of the more technical  
6 things. I may not ask it a way that  
7 makes exact sense to you. So just let me  
8 know, and then I can always try to  
9 rephrase the question or ask it a  
10 different way. Okay?

11 A. Yes.

12 Q. Who contacted you first in  
13 connection with this case?

14 A. I believe it was Mr. Mougey.

15 Q. When was that?

16 A. Approximately a year ago.  
17 So early last year, February or March of  
18 2018 is what I recall.

19 Q. And have you been working on  
20 this case since that time?

21 A. Or shortly thereafter. So I  
22 was contacted sometime a few weeks or a  
23 month perhaps before I would say that we  
24 actually started working on the case.

Page 20

1 Q. Have you worked with  
2 Mr. Mougey before?

3 A. Yes.

4 Q. On how many cases?

5 A. It depends a little bit on  
6 how you count the cases --

7 Q. Sure.

8 A. -- because my office  
9 processes a lot of cases that I'm not  
10 personally involved in.

11 The cases that I'm  
12 personally involved in would be in the  
13 dozens, but out of the three or 4,000  
14 cases I've been involved in, I don't know  
15 how to quantify it more than to say some  
16 dozens, anyway.

17 Q. When did you first meet  
18 Mr. Mougey?

19 A. When we were both much  
20 younger. I think almost 20 years ago.  
21 15 years ago, at least, but maybe even a  
22 little bit longer.

23 Q. And did you meet in a  
24 professional setting?

Page 21

1 A. Yes.

2 Q. In connection with a case  
3 that you were working on?

4 A. Yes.

5 Q. As an expert witness?

6 A. Yes.

7 Q. On the same side as  
8 Mr. Mougey?

9 A. Yes.

10 Q. And prior to this  
11 litigation, what's the most recent other  
12 case that you've worked on with  
13 Mr. Mougey?

14 A. I testified at a FINRA  
15 arbitration, securities arbitration  
16 hearing with Mr. Mougey about a year ago.

17 Q. Are you working with  
18 Mr. Mougey on any cases unrelated to the  
19 opioid litigation at present?

20 A. Yes. At least my office is  
21 involved in processing FINRA arbitrations  
22 for Mr. Mougey's firm.

23 I don't think in recent  
24 months, maybe even since last summer I've

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| <p style="text-align: right;">Page 22</p> <p>1 personally been involved in those. But<br/>         2 we have done some work. My firm has done<br/>         3 some work for Mr. Mougey's firm in the<br/>         4 last year.<br/>         5 Q. And when you say FINRA<br/>         6 arbitrations, you are referring to<br/>         7 finance-related type of arbitrations; is<br/>         8 that correct?<br/>         9 A. Correct.<br/>         10 Q. Mostly having to do with<br/>         11 securities?<br/>         12 A. Entirely.<br/>         13 Q. Okay. A little bit of<br/>         14 housekeeping upfront.<br/>         15 So you mentioned that you<br/>         16 had submitted an expert report, and you<br/>         17 agree that there were two supplements.<br/>         18 You included with those -- that report<br/>         19 and those two supplements some<br/>         20 attachments and exhibits, correct?<br/>         21 A. Yes.<br/>         22 Q. So that we have it, this is<br/>         23 what we believe to be the entirety of<br/>         24 what you've submitted thus far. And</p>  | <p style="text-align: right;">Page 24</p> <p>1 I'm going to hold onto it.<br/>         2 MR. MOUGEY: That sounds<br/>         3 good.<br/>         4 BY MS. McENROE:<br/>         5 Q. To make things a little bit<br/>         6 easier, what we've done is for Exhibit 3,<br/>         7 we've bound together your original report<br/>         8 from March 25th -- and I'll hand this to<br/>         9 you in a minute so you can look at it,<br/>         10 with one addition.<br/>         11 We swapped in what I think<br/>         12 you referred to as an errata page, at<br/>         13 Page 35?<br/>         14 A. Yes.<br/>         15 Q. And then we included behind<br/>         16 a blue slip sheet the first supplemental<br/>         17 report that was submitted on April 3,<br/>         18 2019, without any of the attachments or<br/>         19 exhibits. And then behind the next blue<br/>         20 slip sheet, the April 15th supplemental<br/>         21 report. Okay?<br/>         22 Do you see that?<br/>         23 A. Thank you. Yes.<br/>         24 (Document marked for</p> |
| <p style="text-align: right;">Page 23</p> <p>1 we're going to go through it in a little<br/>         2 bit more detail. So that the record is<br/>         3 complete later on, and in case any other<br/>         4 defendant wants to refer back to it, this<br/>         5 is what we believe is the entirety of<br/>         6 what you've submitted to us thus far in<br/>         7 terms of report, supplement, appendices,<br/>         8 and exhibits. Not all the supporting<br/>         9 background code. That was a little too<br/>         10 much to try to print out that your<br/>         11 counsel has provided.<br/>         12 But we're going to mark this<br/>         13 as Exhibit 2. And we're just going to<br/>         14 hold onto it. But if at any time you<br/>         15 want to refer to anything that you've<br/>         16 submitted to us, you just let us know,<br/>         17 and we can grab it out of Exhibit 2. Is<br/>         18 that right?<br/>         19 A. Yes. Thank you.<br/>         20 (Document marked for<br/>         21 identification as Exhibit<br/>         22 McCann-2.)<br/>         23 BY MS. McENROE:<br/>         24 Q. I put a sticker on the box.</p> | <p style="text-align: right;">Page 25</p> <p>1 identification as Exhibit<br/>         2 McCann-3.)<br/>         3 BY MS. McENROE:<br/>         4 Q. We're going to mark that as<br/>         5 Exhibit 3.<br/>         6 And today, if we're<br/>         7 referring -- today or tomorrow, if we're<br/>         8 referring to paragraphs and whatnot, in<br/>         9 any of the reports you've submitted, it's<br/>         10 probably easiest if we refer to this<br/>         11 version. But if you do want any of the<br/>         12 appendices or exhibits for completeness,<br/>         13 we can definitely arrange that. All<br/>         14 right?<br/>         15 A. Thank you. Thank you.<br/>         16 Q. So take a quick second and<br/>         17 look at that with me, just to make sure<br/>         18 that we are speaking the same language<br/>         19 here.<br/>         20 So the first cover sheet is,<br/>         21 as I said, the March 25th report, the<br/>         22 original report that you submitted,<br/>         23 correct?<br/>         24 A. Yes.</p>             |

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| <p style="text-align: right;">Page 26</p> <p>1 Q. Does that look familiar,<br/>2 that's appropriate behind it, generally<br/>3 speaking. You don't need to study it,<br/>4 but --<br/>5 A. Yes.<br/>6 Q. -- that that's your report?<br/>7 And this Page 35 we<br/>8 included, that is the errata sheet we<br/>9 just got this week correcting a figure?<br/>10 A. Correct.<br/>11 Q. In the chart, and in the<br/>12 body?<br/>13 A. Correct.<br/>14 Q. And what you'll -- what<br/>15 you'll see we've done is we've<br/>16 paper-clipped it in. So if you want to<br/>17 see the older one you can just flip it.<br/>18 A. Thank you.<br/>19 Q. Okay?<br/>20 Then if you please keep<br/>21 turning until you get to the first blue<br/>22 slip sheet. That's your supplemental<br/>23 expert report dated April 23rd; is that<br/>24 correct?</p> | <p style="text-align: right;">Page 28</p> <p>1 Q. So let's turn in your first<br/>2 report, your March 25th report to<br/>3 Paragraph 10. And this is under a<br/>4 heading that says "Assignment."<br/>5 Do you see that?<br/>6 A. Yes.<br/>7 Q. And Paragraph 10 says, and<br/>8 I'll try to read slow for Michelle: "I<br/>9 have been asked by plaintiff's counsel to<br/>10 document how I processed, validated and<br/>11 augmented opioid transaction data<br/>12 produced by the Drug Enforcement<br/>13 Administration, DEA, and from the<br/>14 defendants."<br/>15 Did I read that correctly?<br/>16 A. Yes.<br/>17 Q. And that opioid transaction<br/>18 data produced by the DEA you are talking<br/>19 about, that's the ARCOS data?<br/>20 A. Correct.<br/>21 Q. Okay. The next Paragraph 11<br/>22 says, "I have been asked to summarize<br/>23 shipments in the ARCOS data, especially<br/>24 those shipments into Cuyahoga County and</p>              |
| <p style="text-align: right;">Page 27</p> <p>1 A. Yes.<br/>2 Q. And then please proceed<br/>3 forward to the next blue slip sheet, is<br/>4 your second supplemental expert report<br/>5 dated April 15th, correct?<br/>6 A. Yes.<br/>7 Q. Why were you retained in<br/>8 this litigation?<br/>9 A. Because my firm had special<br/>10 expertise in handling large datasets and<br/>11 producing reliable results.<br/>12 Q. In the securities setting?<br/>13 A. In any setting. Data is<br/>14 data.<br/>15 Q. But in the security setting<br/>16 in particular?<br/>17 A. No, not necessarily.<br/>18 Q. In any of the cases you've<br/>19 done previously, have you ever worked<br/>20 with ARCOS data?<br/>21 A. No.<br/>22 Q. Has anyone at your firm ever<br/>23 worked with ARCOS data to your knowledge?<br/>24 A. No.</p>                   | <p style="text-align: right;">Page 29</p> <p>1 Summit County."<br/>2 Did I read that correctly?<br/>3 A. Yes.<br/>4 Q. And then the third in your<br/>5 assignment sections is, "I have also been<br/>6 asked to report the results of applying<br/>7 certain algorithms to the ARCOS data."<br/>8 Did I read that correctly?<br/>9 A. Yes.<br/>10 Q. And does that section<br/>11 accurately summarize your assignment in<br/>12 this litigation?<br/>13 A. As accurately, as fully as<br/>14 three sentences can. If I were to, you<br/>15 know, explain it a little bit more fully,<br/>16 if I were to add three more sentences or<br/>17 nine more sentences, it would be a more<br/>18 complete description, but I think it's<br/>19 a -- it's a good three-sentence<br/>20 description of my assignment.<br/>21 Q. So could you give me the<br/>22 three more sentences of what's been left<br/>23 out of this assignment so I can<br/>24 understand, please?</p> |



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| <p style="text-align: right;">Page 30</p> <p>1 A. Well, there's been nothing<br/>2 left out. I'm just saying that I could<br/>3 offer some more detail.<br/>4 So for instance -- I haven't<br/>5 thought through how I would write three<br/>6 more sentences. I was trying to be as<br/>7 succinct as possible there.<br/>8 Q. Sure.<br/>9 A. But for example, in the<br/>10 third sentence I say, "I have also been<br/>11 asked to report the results of applying<br/>12 certain algorithms to the ARCOS data."<br/>13 Now, later when we get to<br/>14 that section of the report, you'll see<br/>15 that those algorithms are -- are also<br/>16 applied to some supplement from the<br/>17 defendants' individual transaction data.<br/>18 And the same thing with the<br/>19 prior sentence where I write, "I have<br/>20 been asked to summarize shipments in the<br/>21 ARCOS data, especially those shipments<br/>22 into Cuyahoga County and Summit County."<br/>23 So I -- it is correct that I<br/>24 do summarize the shipments in the ARCOS</p> | <p style="text-align: right;">Page 32</p> <p>1 Q. At this point you have been<br/>2 focused on, and you mention in<br/>3 Paragraph 11 here, Cuyahoga and Summit<br/>4 Counties. Have you been retained by<br/>5 plaintiffs with respect to any other<br/>6 litigation in the opioids MDL, which is<br/>7 the multi-district -- district litigation<br/>8 that's organized in the Northern District<br/>9 of Ohio, if you know?<br/>10 A. I'm sorry, I need a little<br/>11 bit of qualification --<br/>12 Q. Sure. Absolutely.<br/>13 A. -- in that -- in that<br/>14 question.<br/>15 Q. Let me -- let me ask it a<br/>16 different way.<br/>17 So Cuyahoga and Summit<br/>18 Counties are discussed in your reports.<br/>19 Do you know if you've been retained by<br/>20 plaintiffs to provide any opinions or to<br/>21 do any data handling for any other<br/>22 plaintiffs --<br/>23 MR. MOUGEY: Objection.<br/>24 BY MS. McENROE:</p> |
| <p style="text-align: right;">Page 31</p> <p>1 data, but I also have included in some of<br/>2 those summaries the individual defendant<br/>3 transaction data. So those are two<br/>4 examples where, if I wanted to add<br/>5 another sentence or another phrase, I'd<br/>6 make that discussion more complete.<br/>7 Those would be some<br/>8 examples. But I actually add those<br/>9 details in the subsequent section. So I<br/>10 think the three-sentence summary of my<br/>11 assignment is fine the way it is.<br/>12 Q. Great. And you had, when<br/>13 I -- when I asked you earlier, asked<br/>14 about why you had been retained. You<br/>15 made reference to handling large<br/>16 datasets, which, in my read, matches with<br/>17 the explanation in the -- in the<br/>18 assignment here in broad strokes.<br/>19 Is there anything other than<br/>20 handling datasets in some way that you're<br/>21 trying to say is part of your assignment<br/>22 in this litigation?<br/>23 A. Not that I can think of as I<br/>24 sit here.</p>     | <p style="text-align: right;">Page 33</p> <p>1 Q. -- other than Cuyahoga and<br/>2 Summit Counties?<br/>3 A. Well, there's a -- that's a<br/>4 compound question. And so without<br/>5 misleading you, I'll just say yes. The<br/>6 answer to that question would be yes.<br/>7 Q. Have you been retained for<br/>8 other federal cases, do you know?<br/>9 MR. MOUGEY: Objection.<br/>10 THE WITNESS: I'm not sure<br/>11 as I sit here.<br/>12 BY MS. McENROE:<br/>13 Q. Have you been retained for<br/>14 any state cases, opioid related?<br/>15 A. I believe so.<br/>16 Q. Which states?<br/>17 A. We've handled some data for<br/>18 a handful of states that I'll -- I'll<br/>19 describe in a minute, I'll list to the<br/>20 best of my ability in a minute.<br/>21 I'm not sure whether --<br/>22 well, I am certain that we have not been<br/>23 retained as testifying experts in any of<br/>24 those cases.</p>                 |

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1 And I'm not completely sure  
2 of -- of how much work we may have done  
3 for one state versus another.  
4 We have been retained to  
5 provide summary reports like what you see  
6 attached to the first report, what I  
7 would call pharmacy reports or labeler  
8 reports or distributor reports,  
9 summarizing shipments into counties and  
10 states.  
11 We've been retained to  
12 provide those preliminary high level  
13 summaries to most of the states in the  
14 country. And then we've been retained to  
15 do a little bit of additional analysis  
16 for three or four or five states,  
17 Delaware, Oklahoma, Ohio, New York, and  
18 Florida are the ones that come to mind,  
19 those five, but varying greatly in how  
20 much work we've done from almost nothing  
21 to a little bit more than nothing.  
22 Q. Aside from the reports that  
23 we've already talked about today and  
24 marked as Exhibits 2 and 3, have you

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1 submitted any other expert reports in an  
2 opioids-related litigation, whether it's  
3 in federal or state court?  
4 A. No.  
5 Q. Are you engaged for any  
6 other purpose in connection with the  
7 opioids litigation? And what I mean by  
8 that is, for example, to write discovery  
9 responses on behalf of plaintiffs?  
10 A. No.  
11 Q. You're getting paid in  
12 connection with your work on behalf of  
13 plaintiffs in this litigation?  
14 A. Yes.  
15 Q. And \$475 an hour?  
16 A. Yes, that's correct.  
17 Q. Just --  
18 A. I'm sorry.  
19 Q. Oh, yeah. Go ahead.  
20 A. That's not quite accurate.  
21 I personally, I'm not being paid. My  
22 firm is billing at \$475 an hour for my  
23 time and at lesser amounts for staff  
24 working on the project.

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1 Q. You got my next question.  
2 So you're billing through the Securities  
3 Litigation and Consulting Group; is that  
4 correct?  
5 A. Correct.  
6 Q. And if I call that SLCG,  
7 you'll know what I'm talking about today?  
8 A. Yes.  
9 Q. What is your relationship to  
10 SLCG?  
11 A. I own it.  
12 Q. You own it. Does anybody  
13 else own part of it with you?  
14 A. No.  
15 Q. And are you the founder as  
16 well of SLCG?  
17 A. Yes.  
18 Q. Are there any other  
19 principals or partners with you?  
20 A. Well, a principal or partner  
21 is sometimes more of a marketing title  
22 than a legal ownership. So there are  
23 other people who we refer to as  
24 principals. And I might refer to a peer

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1 as a partner sometimes, but I'm the sole  
2 owner.  
3 Q. Are any other principals,  
4 for marketing purposes or otherwise,  
5 working on the opioid litigation along  
6 with you from SLCG?  
7 A. Yes.  
8 Q. Who are they?  
9 A. I think Mike Yan, Y-A-N.  
10 Q. And what about Joshua  
11 Mallett? Is he a principal?  
12 A. I don't think we've attached  
13 that marketing title to him but he has  
14 worked on the project. That's correct.  
15 Q. What about other SLCG staff  
16 members? So Mike Yan as principal, and  
17 Joshua Mallett presumably then as staff?  
18 A. I just don't recall what  
19 Joshua's title is. We could look at my  
20 website -- at our website and it would  
21 tell you what his title is. I'm not  
22 recalling as I sit here. But in addition  
23 to Mike and Joshua, Chuan, C-H-U-A-N,  
24 Qin, Q-I-N, has worked on the project.

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| <p style="text-align: right;">Page 38</p> <p>1 Regina Meng, M-E-N-G. Susan Song,<br/>                 2 S-O-N-G. Briant with an I, B-R-I-A-N-T,<br/>                 3 Lyu, I think his last name is L-I-U<br/>                 4 (sic). There may be a couple of other<br/>                 5 staff who have worked on the project,<br/>                 6 Lanxi, L-A-N-X-I. And I apologize I'm<br/>                 7 blanking on her last name. It's another<br/>                 8 Chinese last name. Again, you'll find<br/>                 9 her on our website. There may be one or<br/>                 10 two additional names. But those are the<br/>                 11 people that come to mind who have worked<br/>                 12 on the project over the last year.<br/>                 13 Q. Are they all still -- or I<br/>                 14 should -- strike that.<br/>                 15 Are they all employed by<br/>                 16 SLCG?<br/>                 17 A. Yes. I'm sorry. I thought<br/>                 18 your question was SLCG employees who have<br/>                 19 worked on the project.<br/>                 20 Q. Correct. I just want to<br/>                 21 make sure they are still employed, is my<br/>                 22 question.<br/>                 23 A. Yes, they are.<br/>                 24 Q. Have they continuously been</p> | <p style="text-align: right;">Page 40</p> <p>1 A. Yes. Of course there's a<br/>                 2 lot more than just salary involved before<br/>                 3 you get to me. But at the end of the<br/>                 4 year, if there's anything left over it<br/>                 5 comes to me.<br/>                 6 Q. And that's true of the<br/>                 7 amount that you get billed out at as<br/>                 8 well; is that true?<br/>                 9 A. Correct.<br/>                 10 Q. Let's start with Mike Yan<br/>                 11 just briefly. What is, in broad strokes,<br/>                 12 his educational background? What's his<br/>                 13 highest degree if you know?<br/>                 14 A. Yes. He's got a Ph.D. in<br/>                 15 applied mathematics from -- from UC<br/>                 16 Davis.<br/>                 17 (Brief interruption.)<br/>                 18 MS. McENROE: Let's give it<br/>                 19 one second. Off the record.<br/>                 20 THE VIDEOGRAPHER: Off the<br/>                 21 record.<br/>                 22 (Whereupon, a discussion was<br/>                 23 held off the record.)<br/>                 24 THE VIDEOGRAPHER: We are</p>                                  |
| <p style="text-align: right;">Page 39</p> <p>1 employed since they worked on the project<br/>                 2 as SLCG?<br/>                 3 A. Yes.<br/>                 4 Q. In your report, you wrote<br/>                 5 that there was a range from 100 to \$350<br/>                 6 for the staff from SLCG working on this<br/>                 7 matter. Is that accurate?<br/>                 8 A. Yes. It might be a little<br/>                 9 bit tighter than that. I'm not sure that<br/>                 10 anybody is -- anybody's billing rate is<br/>                 11 \$100 an hour. The lowest billing rate<br/>                 12 might be 125 or 135. I don't know. But<br/>                 13 that range certainly covers it.<br/>                 14 Q. And they get billed out and<br/>                 15 the money then flows to SLCG; is that<br/>                 16 correct?<br/>                 17 A. Correct.<br/>                 18 Q. And then they get paid some<br/>                 19 salary, presumably, by SLCG?<br/>                 20 A. Correct.<br/>                 21 Q. And then you -- you<br/>                 22 personally do profit somewhat from the<br/>                 23 work that they've done on behalf of SLCG;<br/>                 24 is that correct?</p>  | <p style="text-align: right;">Page 41</p> <p>1 back on the record at 10:27 a.m.<br/>                 2 BY MS. McENROE:<br/>                 3 Q. So we were just talking<br/>                 4 about Dr. Yan has a Ph.D. in applied<br/>                 5 mathematics from UC Davis; is that<br/>                 6 correct?<br/>                 7 A. Yes. I believe it's applied<br/>                 8 mathematics. If we looked at his bio and<br/>                 9 his resumé on my website, it might be<br/>                 10 applied statistics or applied<br/>                 11 mathematics. And then he did a post-doc<br/>                 12 for three years at Cal Tech.<br/>                 13 Q. In what?<br/>                 14 A. In the math department.<br/>                 15 Teaching mathematics at Cal Tech.<br/>                 16 Q. Do you intend him to testify<br/>                 17 in this matter?<br/>                 18 A. No. It's not for me to<br/>                 19 intend, but I don't -- I don't anticipate<br/>                 20 that happening.<br/>                 21 Q. Joshua Mallett, is he a<br/>                 22 Ph.D. as well?<br/>                 23 A. No. He is what I think what<br/>                 24 we call ABD, all but dissertation, in</p> |

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| <p style="text-align: right;">Page 42</p> <p>1 accounting from the University of<br/>         2 Michigan.<br/>         3 Q. Chuan Qin, if I said that<br/>         4 correctly. What is that person's highest<br/>         5 level of education?<br/>         6 A. He also has a Ph.D. in<br/>         7 applied mathematics or applied statistics<br/>         8 from UC Davis.<br/>         9 Q. Regina Meng, her highest<br/>         10 level of education?<br/>         11 A. She has a master's degree in<br/>         12 finance. Might be styled a master's of<br/>         13 science in finance at University of<br/>         14 Maryland at College Park.<br/>         15 Q. Susan Song?<br/>         16 A. She has a -- same degree,<br/>         17 master's of science in finance from the<br/>         18 University of Maryland.<br/>         19 Q. Briant Lyu? Lyu? Is that<br/>         20 correct? I'm sorry.<br/>         21 A. After 20 years I'm still not<br/>         22 pronouncing these names right.<br/>         23 He has the same or similar<br/>         24 degree from John Hopkins. So...</p> | <p style="text-align: right;">Page 44</p> <p>1 A. It would have a pretty big<br/>         2 range, if we were not to look at the<br/>         3 invoices or the billing records. But<br/>         4 it's varied from month to month since we<br/>         5 started a year ago. Some months as<br/>         6 little as 40 or 50 hours, some months as<br/>         7 much as 100 or 125 hours. And so it<br/>         8 would just be the sum of those numbers<br/>         9 that varied by a month, since we started<br/>         10 working on the project early on, maybe<br/>         11 even less than 40 or 50 hours. But most<br/>         12 of the months would be somewhere between<br/>         13 40 and 50 hours, and maybe as much as<br/>         14 125 hours.<br/>         15 Q. Have you yet invoiced<br/>         16 plaintiffs for your work on the opioids<br/>         17 litigation?<br/>         18 A. Yes.<br/>         19 Q. Okay. Have those invoices<br/>         20 been paid?<br/>         21 A. Yes.<br/>         22 Q. How much total, if you know?<br/>         23 A. I don't.<br/>         24 Q. Can you ballpark that?</p> |
| <p style="text-align: right;">Page 43</p> <p>1 Q. A master's?<br/>         2 A. A masters in finance or<br/>         3 master's of science in finance from the<br/>         4 University of -- from John Hopkins.<br/>         5 Q. And was it Lanxi? The last<br/>         6 name I wrote down.<br/>         7 A. Yes.<br/>         8 Q. And what is that person's<br/>         9 highest level of education?<br/>         10 A. It's the same degree. I<br/>         11 think it's from John Hopkins. It might<br/>         12 be from the University of Maryland. We<br/>         13 have to just look at our website or her<br/>         14 resumé to tell you for sure.<br/>         15 Q. Collectively, do you know<br/>         16 how many hours you have yet -- sorry.<br/>         17 Strike that.<br/>         18 Collectively, do you know<br/>         19 how many hours you have worked on the<br/>         20 opioids litigation altogether since your<br/>         21 engagement?<br/>         22 A. No.<br/>         23 Q. Can you give me a ballpark<br/>         24 estimate?</p>                           | <p style="text-align: right;">Page 45</p> <p>1 A. Yes. Some months, as I<br/>         2 said, my own personal hours, there is a<br/>         3 significant variation. Some months as<br/>         4 little as maybe \$75,000 and some months<br/>         5 as much as 225- or \$250,000.<br/>         6 Q. For a month?<br/>         7 A. Correct.<br/>         8 Q. And that's just from your<br/>         9 time?<br/>         10 A. No. That's -- you are<br/>         11 asking about the firm.<br/>         12 Q. Oh yeah. Got it. Okay.<br/>         13 A. So that would be the firm.<br/>         14 Q. Yeah. And do you have an<br/>         15 estimate on the hours that your staff,<br/>         16 the SLCG staff has worked on this matter<br/>         17 so far?<br/>         18 A. In hours or dollars?<br/>         19 Q. I was going to ask both. So<br/>         20 both would be great.<br/>         21 A. Well, the easiest way for me<br/>         22 to think about it is in -- in dollars<br/>         23 working back from the answers that I just<br/>         24 gave you.</p>  |

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| <p style="text-align: right;">Page 46</p> <p>1 Q. Sure.</p> <p>2 A. Right. So my -- my</p> <p>3 involvement at 40 or 50 hours is 15- or</p> <p>4 \$20,000 at \$475 an hour; as much as 60-</p> <p>5 or \$70,000 at 125 hours a month. So my</p> <p>6 time has been roughly proportionate, I</p> <p>7 think, with other people's time. So if I</p> <p>8 billed 20- or \$25,000 in a month, it's</p> <p>9 like that would be likely one of the</p> <p>10 months where we were less active, maybe</p> <p>11 early in the project. And so if the</p> <p>12 invoice was \$75,000, other staff put in</p> <p>13 perhaps \$50,000 worth of time in those</p> <p>14 lesser activity months.</p> <p>15 Just ballparking it at \$200</p> <p>16 an hour, that would be maybe 250 hours.</p> <p>17 And then we did the --</p> <p>18 Q. Collectively or for separate</p> <p>19 individuals?</p> <p>20 A. Oh no, collectively. I have</p> <p>21 no idea individuals. You know, we would</p> <p>22 have to look at the records to tell you.</p> <p>23 I'm just trying to give you --</p> <p>24 Q. Sure.</p> | <p style="text-align: right;">Page 48</p> <p>1 expressed in this litigation?</p> <p>2 A. Yes.</p> <p>3 Q. Are you involved in hiring</p> <p>4 the staff?</p> <p>5 A. I am.</p> <p>6 Q. And interviewing them?</p> <p>7 A. Yes.</p> <p>8 Q. Aside from your hourly rate</p> <p>9 and the hourly rate of the other SLCG</p> <p>10 employees, are you otherwise being</p> <p>11 compensated in any way in connection with</p> <p>12 the opioids litigation?</p> <p>13 A. No.</p> <p>14 Q. You haven't been paid</p> <p>15 anything else or promised anything else?</p> <p>16 A. Of course not.</p> <p>17 Q. Okay. Do you have any</p> <p>18 outstanding invoices at present?</p> <p>19 A. Just the most recent one.</p> <p>20 Just the one that I submitted a week ago</p> <p>21 for -- for April.</p> <p>22 Q. And how much was that one?</p> <p>23 A. I don't remember.</p> <p>24 Q. What did you do, if</p>   |
| <p style="text-align: right;">Page 47</p> <p>1 A. -- the best estimate I can</p> <p>2 as I sit here.</p> <p>3 And then you do the same</p> <p>4 arithmetic for the higher activity</p> <p>5 months. If I put in 125 hours, that</p> <p>6 would come to 50- or \$60,000. And if in</p> <p>7 total we billed \$225,000, it would be</p> <p>8 another 150- or \$160,000 of staff time,</p> <p>9 that would be roughly 800 hours.</p> <p>10 So I -- I'm just giving you</p> <p>11 very broad ranges and estimates based on</p> <p>12 what I think as I sit here.</p> <p>13 Q. Thank you.</p> <p>14 And does that staff, they</p> <p>15 work at your direction; is that correct?</p> <p>16 A. Yes.</p> <p>17 Q. You oversee their work?</p> <p>18 A. I do.</p> <p>19 Q. You check their work?</p> <p>20 A. I do.</p> <p>21 Q. And you approve their work?</p> <p>22 A. I do.</p> <p>23 Q. And you are adopting some of</p> <p>24 their work in the opinions you've</p>  | <p style="text-align: right;">Page 49</p> <p>1 anything, to prepare for today's</p> <p>2 deposition?</p> <p>3 A. Well, I did a year's worth</p> <p>4 of work and supervised my staff doing</p> <p>5 that work.</p> <p>6 I wrote a significant report</p> <p>7 and two smaller supplements. I, as part</p> <p>8 of that, reviewed a lot of material, did</p> <p>9 a lot of analysis. And then more</p> <p>10 recently went over some of that with --</p> <p>11 with attorneys in my office and with my</p> <p>12 staff.</p> <p>13 Q. I want to ask you a couple</p> <p>14 questions about what you just said. So</p> <p>15 you said attorneys in my office. Does</p> <p>16 SLCG employ attorneys, or is it that</p> <p>17 outside attorneys came and physically</p> <p>18 were in your office?</p> <p>19 A. We don't employ attorneys.</p> <p>20 It's employee -- lawyer -- sorry, we</p> <p>21 don't employ lawyers. What I meant to</p> <p>22 refer to there is attorneys coming to my</p> <p>23 office to discuss the deposition.</p> <p>24 Q. Who?</p> |



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| <p style="text-align: right;">Page 50</p> <p>1 A. So there would be three:<br/>                 2 Page Poerschke, Ty or Tyler Hudson, and<br/>                 3 Jeff Gaddy, G-A-D-D-Y.<br/>                 4 Q. When was that?<br/>                 5 A. I may not get the date<br/>                 6 exactly right, but two weeks ago today<br/>                 7 for part of the day, one week ago today<br/>                 8 for part of a day, and yesterday for a<br/>                 9 part of the day.<br/>                 10 Q. Aside from the three<br/>                 11 attorneys you named, have you met with<br/>                 12 any other attorneys to prepare for your<br/>                 13 deposition?<br/>                 14 A. No. Over breakfast this<br/>                 15 morning, I -- I had coffee with<br/>                 16 Mr. Mougey, but I wouldn't call that<br/>                 17 preparing for my deposition.<br/>                 18 Q. And going back to your<br/>                 19 answer before, about what you did to<br/>                 20 prepare for today's deposition. You<br/>                 21 mentioned that you reviewed a lot of<br/>                 22 material, separate from just reviewing<br/>                 23 your report. What were you referring to<br/>                 24 there?</p>   | <p style="text-align: right;">Page 52</p> <p>1 came to mind as material I reviewed or<br/>                 2 considered as I was writing these<br/>                 3 reports. I -- there's not anything<br/>                 4 necessary for the results that I report<br/>                 5 in this report that I know of, as I sit<br/>                 6 here. If -- if there is -- there may be<br/>                 7 additional items, as I say in<br/>                 8 Paragraph 9(m), additional items in<br/>                 9 footnotes, referred to in the text below.<br/>                 10 Other than what's in this<br/>                 11 paragraph and those items in the text and<br/>                 12 footnotes, I'm not aware of anything<br/>                 13 else.<br/>                 14 Q. Just so the record is clear,<br/>                 15 aside from documents or items cited in<br/>                 16 your reports, did you consider any other<br/>                 17 materials in forming your opinions in<br/>                 18 this case?<br/>                 19 A. I don't recall. Not that<br/>                 20 I'm sitting -- not that I can think of as<br/>                 21 I'm sitting here.<br/>                 22 Q. Okay. Have you ever seen<br/>                 23 any deposition transcripts from this<br/>                 24 case?</p> |
| <p style="text-align: right;">Page 51</p> <p>1 A. Well, as I describe in the<br/>                 2 report, we received data and documents<br/>                 3 starting back as early as April of last<br/>                 4 year, maybe even just a little bit before<br/>                 5 that. I'm not 100 percent clear on that<br/>                 6 as I sit here. But since 13 months ago,<br/>                 7 we were receiving documents and data.<br/>                 8 And that's what I was referring to when I<br/>                 9 said that I reviewed a lot of material.<br/>                 10 Q. Are the materials you're<br/>                 11 referring to listed in your reports?<br/>                 12 So we can take a look. You<br/>                 13 have in front of you your March 25th<br/>                 14 report. If you flip back a page, to<br/>                 15 Section 2, "Materials Reviewed." You'll<br/>                 16 see there's a section here listing a<br/>                 17 number of things.<br/>                 18 Is this the description,<br/>                 19 combined with the materials reviewed<br/>                 20 sections in the two supplemental reports<br/>                 21 that you're referring to?<br/>                 22 A. Well, it may not be<br/>                 23 exhaustive of everything I've looked at<br/>                 24 over the last 13 months. But it's what</p> | <p style="text-align: right;">Page 53</p> <p>1 A. No, I don't think so.<br/>                 2 Q. Have you ever asked to see<br/>                 3 any deposition transcripts from this<br/>                 4 case?<br/>                 5 A. No.<br/>                 6 Q. We've collected up your<br/>                 7 reports. And I know we've marked the<br/>                 8 full set of them. Do these -- do -- do<br/>                 9 your reports represent the full sum of<br/>                 10 opinions you intend to offer in this<br/>                 11 litigation?<br/>                 12 A. With some minor<br/>                 13 qualifications, there might be some small<br/>                 14 qualitative differences between the<br/>                 15 opinions that I would ultimately express<br/>                 16 and what's included here.<br/>                 17 And then of course whatever<br/>                 18 the court requests. If the court<br/>                 19 requests any additional analysis, or if<br/>                 20 it's determined some additional analysis<br/>                 21 would be helpful to the court, I fully<br/>                 22 intend to, of course, do that work and<br/>                 23 offer those opinions.<br/>                 24 Q. What small qualitative</p>  |

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| <p style="text-align: right;">Page 54</p> <p>1 changes do you anticipate making before<br/>                 2 trial?</p> <p>3 A. Well, for instance, when<br/>                 4 we -- when I -- I discuss the defendants'<br/>                 5 transaction production, I identify a<br/>                 6 number of defendants whose production<br/>                 7 seems to fall short of what they were<br/>                 8 submitting to ARCOS in realtime.</p> <p>9 Over the last few months as<br/>                 10 a result, I think, of requests from<br/>                 11 plaintiff's counsel, defendants have been<br/>                 12 supplementing that production after my<br/>                 13 initial report was filed. In fact, just<br/>                 14 yesterday, one of the distributors<br/>                 15 produced the data that we had identified<br/>                 16 was missing from their earlier<br/>                 17 production.</p> <p>18 There are still other<br/>                 19 defendants that have not filled in gaps<br/>                 20 in their transaction data, at least where<br/>                 21 we think there are gaps. So that would<br/>                 22 be an example where there might be some<br/>                 23 slight quantitative changes to the<br/>                 24 opinions that are expressed if the</p> | <p style="text-align: right;">Page 56</p> <p>1 table where a few numbers needed to be<br/>                 2 edited. So there may be examples like<br/>                 3 that that I'm not aware of. But there's<br/>                 4 nothing as I sit here, nothing that I'm<br/>                 5 aware of where there would be some,<br/>                 6 again, very small de minimus edit or two.</p> <p>7 Q. Let's take a look at that<br/>                 8 page, 35, that errata sheet.</p> <p>9 A. Sure.</p> <p>10 Q. And we did our best to print<br/>                 11 it out. So you can see up in the text<br/>                 12 there's a strikethrough --</p> <p>13 A. Yes.</p> <p>14 Q. -- on a portion of that<br/>                 15 figure. And that figure has been updated<br/>                 16 in the Table 15 down below; is that<br/>                 17 correct?</p> <p>18 A. Correct.</p> <p>19 Q. Have there been any other<br/>                 20 changes to this Page 35? That was the<br/>                 21 only one that I had seen, those two,<br/>                 22 without spending a lot of time studying<br/>                 23 the whole thing.</p> <p>24 A. Well, if you look across the</p>  |
| <p style="text-align: right;">Page 55</p> <p>1 defendants continue to produce data as<br/>                 2 they did yesterday.</p> <p>3 But I don't anticipate that<br/>                 4 production to change the opinions that<br/>                 5 I've expressed here.</p> <p>6 In fact, the production<br/>                 7 yesterday I think further strengthens one<br/>                 8 of the core opinions.</p> <p>9 Q. Aside from some productions<br/>                 10 being made later in time, with respect to<br/>                 11 the documents and data and information<br/>                 12 that was available to you when you<br/>                 13 already issued your reports, do you<br/>                 14 anticipate making any small qualitative<br/>                 15 changes prior to trial?</p> <p>16 A. Well, not that I know of as<br/>                 17 I sit here. But I'm humanly imperfect.<br/>                 18 As we discussed before we went on the<br/>                 19 record, there was a small -- maybe we<br/>                 20 discussed it on the record. There was a<br/>                 21 small errata to Table 15. And so it<br/>                 22 doesn't change the opinions in any way at<br/>                 23 all. But there was one -- one number in<br/>                 24 the text that needed to be edited and a</p>         | <p style="text-align: right;">Page 57</p> <p>1 bottom of Table 15, you'll see in the<br/>                 2 number of transactions in the report. It<br/>                 3 says 542,898.</p> <p>4 Q. Yeah.</p> <p>5 A. The software and the data<br/>                 6 that we gave you produces a table that<br/>                 7 says 542,900. So that's an example of<br/>                 8 what I think is a truly trivial change.</p> <p>9 It's maybe a couple of<br/>                 10 thousandths of one percent difference.<br/>                 11 And as you read across you'll see the<br/>                 12 same thing with the MME. The difference<br/>                 13 there is 300 and -- sorry, 435 MME on<br/>                 14 four billion MME.</p> <p>15 So there are very tiny, tiny<br/>                 16 differences between Table 15 on the<br/>                 17 errata page and Table 15 that had been<br/>                 18 put in as a draft in the report in which<br/>                 19 I hadn't updated.</p> <p>20 So that's an example where<br/>                 21 there may be a number that I would change<br/>                 22 by a few hundredths of a percent or even<br/>                 23 a few thousandths of a percent. I can<br/>                 24 explain why that might be.</p> |

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| <p style="text-align: right;">Page 58</p> <p>1 But other than that sort of<br/> 2 thing, I don't -- I don't anticipate<br/> 3 changing anything other than changing it<br/> 4 as a result of the continued production<br/> 5 by the defendants.<br/> 6 The very next page, Page 36,<br/> 7 illustrates that. Figure 3 on Page 36<br/> 8 will have to be changed because of the<br/> 9 data that was produced yesterday.<br/> 10 Q. So how did errata -- the<br/> 11 errata of Page 35 come to be? Did you<br/> 12 make -- type in these changes?<br/> 13 A. No.<br/> 14 Q. Who did?<br/> 15 A. Well, the code that we gave<br/> 16 you, we actually gave you two pieces of<br/> 17 code and two data files that create Table<br/> 18 15 for Cardinal Health. This table<br/> 19 refers to Cardinal Health.<br/> 20 And in the production of<br/> 21 data and code to you, we gave you two<br/> 22 versions -- inadvertently gave you an<br/> 23 earlier version of the code and data that<br/> 24 produced the version of the table that is</p>  | <p style="text-align: right;">Page 60</p> <p>1 this report. And in fact I certainly of<br/> 2 course adopt every sentence that's in<br/> 3 this report. But I either wrote it from<br/> 4 beginning to period or someone else wrote<br/> 5 some version of a sentence that I edited.<br/> 6 Q. We talked a couple minutes<br/> 7 ago about your assignment in this matter.<br/> 8 Do you remember that?<br/> 9 A. Yes.<br/> 10 Q. Who delivered that<br/> 11 assignment to you? I'm looking back, if<br/> 12 it's helpful, on Page 4 at Paragraphs 10,<br/> 13 11 12. It says, "I have been asked by<br/> 14 plaintiff's counsel," to start out.<br/> 15 So I'm just wondering who<br/> 16 actually that was that delivered that<br/> 17 assignment to you?<br/> 18 A. I don't recall it being<br/> 19 conveyed by any individual, but rather an<br/> 20 understanding that I developed as a<br/> 21 result of discussions with attorneys over<br/> 22 the past six months -- past, yeah, six<br/> 23 months maybe and -- which I summarized in<br/> 24 my own words in these three sentences.</p> |
| <p style="text-align: right;">Page 59</p> <p>1 in the report. And there had been some<br/> 2 very slight modification to the data or<br/> 3 code. And we gave you that as well. And<br/> 4 so what we did was we ran the code that<br/> 5 we gave you. And it produces an Excel<br/> 6 tab that has the content of Table 15.<br/> 7 And then someone in my office, Joshua<br/> 8 Mallett, I believe, copied and pasted<br/> 9 that content which is an Excel file tab<br/> 10 into this table.<br/> 11 And then I, I believe,<br/> 12 struck through the 2336 in Paragraph 86<br/> 13 which should obviously be 1618.<br/> 14 Q. Did you type the remainder<br/> 15 of your report, the body of it?<br/> 16 A. Virtually all of it.<br/> 17 Some -- some portions of it may have been<br/> 18 first -- some words, or even sentences<br/> 19 may have been first typed by someone else<br/> 20 in my office.<br/> 21 Q. Anyone in particular or just<br/> 22 one of the people working with you?<br/> 23 A. No one in particular. I<br/> 24 think I wrote every sentence that's in</p> | <p style="text-align: right;">Page 61</p> <p>1 Q. From whom did you develop<br/> 2 that understanding?<br/> 3 A. From interactions with<br/> 4 primarily three or four lawyers.<br/> 5 Q. Who?<br/> 6 A. Maybe -- in total I may have<br/> 7 interacted with a dozen lawyers that<br/> 8 informed my summary of what my assignment<br/> 9 was. But I would say -- I would say<br/> 10 primarily Mr. Mougey.<br/> 11 Q. You said three to four, from<br/> 12 the interactions primarily with three to<br/> 13 four. So besides Mr. Mougey, who are the<br/> 14 other two to three?<br/> 15 A. I'm not sure to what extent<br/> 16 these others might have informed my<br/> 17 understanding of what I was being asked<br/> 18 to do. But over time I spoke to Paul<br/> 19 Farrell, F-A-R-R-E-L-L, Mike Fuller.<br/> 20 Page Poerschke, Tyler Hudson, Joe Rice.<br/> 21 And then on the -- more on<br/> 22 the periphery, just other people that I<br/> 23 interacted with this on this project over<br/> 24 the last six months.</p>   |

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| <p style="text-align: right;">Page 62</p> <p>1 Q. Can you list them for me,<br/>2 please, that you can remember?<br/>3 A. Do you need an exhaustive<br/>4 list of who I've interacted with or who I<br/>5 think I interacted with that might have<br/>6 informed my understanding of the<br/>7 assignment?<br/>8 Q. Yes, good question. So<br/>9 throughout you've made reference to<br/>10 plaintiffs' counsel. And I'm just trying<br/>11 to get an understanding, when you do<br/>12 that, to whom you are referring.<br/>13 A. Well, my primary point of<br/>14 contact was Mr. Mougey, although I did<br/>15 have interaction with others, including<br/>16 the ones that I've just identified for<br/>17 you.<br/>18 Q. Did you speak directly with<br/>19 anyone from Cuyahoga County?<br/>20 A. Not that I'm aware of.<br/>21 Q. Summit County?<br/>22 A. Not that I'm aware of.<br/>23 Q. The City of Akron?<br/>24 A. Not that I'm aware of.</p> | <p style="text-align: right;">Page 64</p> <p>1 but there have been other consultants to<br/>2 the plaintiffs. Maybe a nonlawyer<br/>3 employee of Levin Papantonio or one of<br/>4 the other firms, and then maybe outside<br/>5 consultants, maybe some other testifying<br/>6 experts.<br/>7 But none of those<br/>8 interactions informed my understanding of<br/>9 my assignment or any of the conclusions<br/>10 that I reached.<br/>11 Q. You mentioned that you maybe<br/>12 spoke with outside consultants for<br/>13 plaintiffs. With whom did you speak?<br/>14 A. I don't recall the names.<br/>15 But early on, there were some who I -- I<br/>16 think to be former DEA employees.<br/>17 Oh, I should also add, very<br/>18 early on, we spoke to some current DEA<br/>19 employees about the data.<br/>20 Again, I don't think that<br/>21 any of those discussions affected my<br/>22 understanding of my assignment or the<br/>23 opinions that I expressed, but for<br/>24 completeness, it would include those two</p>   |
| <p style="text-align: right;">Page 63</p> <p>1 Q. City of Cleveland?<br/>2 A. Not that I'm aware of.<br/>3 Q. Did you speak with anyone<br/>4 other than plaintiffs' counsel to form<br/>5 any opinions or understandings you had<br/>6 about any facts in this case?<br/>7 A. Yes.<br/>8 Q. Who?<br/>9 A. Well, my staff.<br/>10 Q. Okay. Outside of your staff<br/>11 and outside of plaintiffs' counsel, did<br/>12 you discuss anything with anyone in<br/>13 connection with this case?<br/>14 A. If that connects up to your<br/>15 prior question, the answer would be no.<br/>16 Q. Not connecting up to my<br/>17 prior question. So just as a brand new<br/>18 question. Aside from plaintiffs' counsel<br/>19 and aside from other of your staff, have<br/>20 you discussed the opioids litigation with<br/>21 anybody else?<br/>22 A. Yes.<br/>23 Q. Who?<br/>24 A. I don't remember their names</p>   | <p style="text-align: right;">Page 65</p> <p>1 categories at least.<br/>2 Q. Do you recall the names of<br/>3 any of the former or current DEA<br/>4 employees with whom you spoke?<br/>5 A. I think if you mention the<br/>6 names it would prompt my memory. But the<br/>7 only one that comes to mind is<br/>8 Mr. Rafalski. But there were two or<br/>9 three others. And the conversation that<br/>10 I had with current DEA employees was just<br/>11 a very brief telephone conference back in<br/>12 March or April of last year, so 13 or<br/>13 14 months ago, about the data we were<br/>14 going to receive, what -- what format it<br/>15 would be in, what size it would be. A<br/>16 little bit of explanation, kind of a<br/>17 preliminary description of the fields<br/>18 that might be in the data.<br/>19 That was a very short call.<br/>20 There were three or four people from the<br/>21 DEA on the call. One person seemed<br/>22 particularly knowledgeable about the<br/>23 data. The entire call -- with -- with<br/>24 attorneys on the call as well, but the</p> |

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| <p style="text-align: right;">Page 66</p> <p>1 entire call was six or eight or<br/>                 2 ten minutes. That's the only interaction<br/>                 3 I'm aware of.<br/>                 4 Q. You mentioned that there<br/>                 5 were attorneys on that phone call with<br/>                 6 the DEA you were just talking to. Was<br/>                 7 that counsel for plaintiffs, counsel for<br/>                 8 defendants, both, do you know?<br/>                 9 A. I think it was counsel for<br/>                 10 plaintiffs and counsel at the DEA.<br/>                 11 Q. You mentioned in addition to<br/>                 12 that you maybe spoke to outside<br/>                 13 consultants that you also maybe spoke to<br/>                 14 outside experts. You mentioned<br/>                 15 Mr. Rafalski. Anybody else that comes to<br/>                 16 mind in terms of plaintiffs' experts with<br/>                 17 whom you've spoken?<br/>                 18 A. Yes.<br/>                 19 Q. Who?<br/>                 20 A. I recognize three names, I<br/>                 21 think, who may or may not have filed<br/>                 22 expert reports. But a Professor<br/>                 23 Rosenthal, Professor Cutler, and a<br/>                 24 Ms. Keller. There may be others, but</p>                              | <p style="text-align: right;">Page 68</p> <p>1 A. I don't recall if he was in<br/>                 2 my office just once or if he was in my<br/>                 3 office twice.<br/>                 4 The first time I believe<br/>                 5 there were four individuals and<br/>                 6 Mr. Rafalski is the only name I<br/>                 7 recognize. And then later there were two<br/>                 8 or three of that same -- a subset of the<br/>                 9 first group that had been in my office.<br/>                 10 And I don't recall whether Mr. Rafalski<br/>                 11 was one of them or not.<br/>                 12 Q. When you say there were four<br/>                 13 individuals, to whom are you referring,<br/>                 14 yourself, Mr. Rafalski and who else?<br/>                 15 A. No, I'm sorry. When I -- I<br/>                 16 was referring to four individuals, I<br/>                 17 mean -- my recollection now, 13 or<br/>                 18 14 months ago, is that when we first got<br/>                 19 the data, there were three or four former<br/>                 20 DEA employees in my office to help us<br/>                 21 understand at a high level what the data<br/>                 22 was, we were looking at.<br/>                 23 THE COURT REPORTER: If<br/>                 24 counsel on the phone can actually</p> |
| <p style="text-align: right;">Page 67</p> <p>1 those are the names that come to mind as<br/>                 2 people who may have filed expert reports<br/>                 3 in this case as well.<br/>                 4 Q. When did you speak with<br/>                 5 Mr. Rafalski?<br/>                 6 A. I believe he was in my<br/>                 7 office very early on in the process in<br/>                 8 April or May of last year. And then I<br/>                 9 believe he was in my office more recently<br/>                 10 in the last couple of months.<br/>                 11 He was -- I think he has<br/>                 12 family in the area and he wanted to<br/>                 13 borrow my conference room. So I didn't<br/>                 14 have any substantive discussion with him<br/>                 15 that last time. But he -- he has been in<br/>                 16 my office once in the last few months to<br/>                 17 spend a day in my conference room<br/>                 18 working.<br/>                 19 Q. In terms of substantive<br/>                 20 discussions with Mr. Rafalski regarding<br/>                 21 the opioids litigation, was it just the<br/>                 22 one conversation you had with him in your<br/>                 23 office early on in April of May -- April<br/>                 24 or May?</p> | <p style="text-align: right;">Page 69</p> <p>1 mute themselves? We're getting a<br/>                 2 lot of feedback here. Thank you.<br/>                 3 BY MS. McENROE:<br/>                 4 Q. And you don't remember who<br/>                 5 those DEA agents were, correct, former<br/>                 6 DEA agents?<br/>                 7 A. I remember their faces. I<br/>                 8 don't remember their names. I'm sorry.<br/>                 9 Q. Did you ever provide<br/>                 10 anything in writing to Mr. Rafalski?<br/>                 11 A. No.<br/>                 12 Q. Did you ever provide him<br/>                 13 with any computer code or data?<br/>                 14 A. No, not to my knowledge.<br/>                 15 Q. Did you show him computer<br/>                 16 code or data when he was in your office?<br/>                 17 A. Not personally. Although,<br/>                 18 the purpose of him being there, I think,<br/>                 19 wasn't my request. I'm inferring what<br/>                 20 the purpose was. But I think the purpose<br/>                 21 was to look at the data as it was coming<br/>                 22 in from the DEA.<br/>                 23 It came in in -- in three or<br/>                 24 four tranches. And when we first got the</p>   |



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| <p style="text-align: right;">Page 70</p> <p>1 data, I think they were there to help us<br/> 2 understand what the data fields were.<br/> 3 Some description in the ARCOS handbook.<br/> 4 But there's more data in the production<br/> 5 than in the -- described in the ARCOS<br/> 6 handbook.<br/> 7 And so my recollection is we<br/> 8 have a very large computer monitor, but<br/> 9 it's -- think of it like a television,<br/> 10 40-inch computer monitor, so that we<br/> 11 could display all of the data.<br/> 12 And so he was probably<br/> 13 looking at data on the screen. I don't<br/> 14 recall him looking at -- at any code.<br/> 15 And the only data that I recall him<br/> 16 looking at was as it would be displayed<br/> 17 on a computer monitor, as we opened the<br/> 18 files we received from the DEA.<br/> 19 Q. You mentioned you spoke with<br/> 20 Professor Rosenthal. When was that?<br/> 21 A. I actually don't recall<br/> 22 speaking with her. If I said it that<br/> 23 way, I was being imprecise.<br/> 24 I was in a meeting sitting a</p> | <p style="text-align: right;">Page 72</p> <p>1 than on that occasion. But I did<br/> 2 interact with her on that occasion as<br/> 3 well, and about the same level, just to<br/> 4 say hello, how are you today.<br/> 5 Q. Aside from Professor<br/> 6 Rosenthal, Professor Cutler, and<br/> 7 Ms. Keller, was anybody else in that<br/> 8 meeting?<br/> 9 A. Yes.<br/> 10 Q. Who?<br/> 11 A. My recollection is it was a<br/> 12 large group, approximately 30 or 40<br/> 13 people. They were strangers to me, other<br/> 14 than a few people, as Professor Cutler<br/> 15 and Professor Rosenthal were strangers to<br/> 16 me, but I -- I recall the name.<br/> 17 Mr. Mougey was there.<br/> 18 Mr. Rice was there. Mr. Farrell was<br/> 19 there. I think Ms. Singer from Joe<br/> 20 Rice's office was there.<br/> 21 And then there were a<br/> 22 Mr. Sobol, S-O-B-O-L. And -- and then<br/> 23 some other people, whether they were<br/> 24 consultants or lawyers, I -- I don't</p> |
| <p style="text-align: right;">Page 71</p> <p>1 few chairs down from Professor Rosenthal,<br/> 2 and I don't recall either her or I<br/> 3 speaking. She may have spoken a little<br/> 4 bit. And so I think I said hello as<br/> 5 we -- as we went to get a bagel or a<br/> 6 coffee at a break. But I -- so I met<br/> 7 her. I don't recall speaking to her<br/> 8 other than hello, I'm Craig McCann.<br/> 9 Q. Who else was in that<br/> 10 meeting?<br/> 11 A. I think Professor Cutler was<br/> 12 there.<br/> 13 Q. Is that when you spoke with<br/> 14 Professor Cutler?<br/> 15 A. Yes. And again I'm not<br/> 16 really sure I spoke to him other than<br/> 17 saying I -- I was in the same room as the<br/> 18 two of them, so I know their names. And<br/> 19 I -- if I interacted with them, it was --<br/> 20 it was kind of just civil talk getting<br/> 21 some lunch.<br/> 22 Q. And is that when you also<br/> 23 interacted with Ms. Keller?<br/> 24 A. I interacted with her more</p>  | <p style="text-align: right;">Page 73</p> <p>1 know. They were strangers, and I didn't<br/> 2 interact with them.<br/> 3 I was only there myself for<br/> 4 a couple of hours in a room about the<br/> 5 size of this room, maybe a little bit<br/> 6 smaller with a similar intimidating<br/> 7 number of people.<br/> 8 Q. When was this meeting?<br/> 9 A. I'm not sure. It was<br/> 10 sometime last year. Maybe in the summer,<br/> 11 but whether it was the early summer or<br/> 12 the late summer, I don't recall.<br/> 13 Q. Beside Professor -- I'm<br/> 14 sorry.<br/> 15 Aside from this one meeting,<br/> 16 had you spoken to Professor Rosenthal or<br/> 17 Cutler separately at all?<br/> 18 A. Never.<br/> 19 Q. Have you ever e-mailed with<br/> 20 them or had any other interactions with<br/> 21 them?<br/> 22 A. Never.<br/> 23 Q. You mentioned that you had<br/> 24 more interactions with Ms. Keller than</p>   |

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| <p style="text-align: right;">Page 74</p> <p>1 that one meeting. What are those other<br/> 2 interactions just in broad strokes, and a<br/> 3 little quickly if we could?<br/> 4 A. Ms. Keller attended a couple<br/> 5 of other meetings that I attended. I'm<br/> 6 not sure whether it's two or three. And<br/> 7 we interacted a little bit otherwise in<br/> 8 the presence of the attorneys, either via<br/> 9 e-mail or on conference calls, as -- as<br/> 10 we were working on the ARCOS data.<br/> 11 Q. You say as we were working<br/> 12 on the ARCOS data. What role, if any,<br/> 13 did Ms. Keller play in your opinions?<br/> 14 A. None.<br/> 15 Q. Did you provide Ms. Keller<br/> 16 with any data or code?<br/> 17 A. Not directly. I don't know<br/> 18 whether counsel provided Ms. Keller with<br/> 19 any data that we processed or developed.<br/> 20 Q. Just a couple quick<br/> 21 questions and then I'd like to move on if<br/> 22 we could. You made some references to<br/> 23 having interacted with other consultants.<br/> 24 In connection with this</p> | <p style="text-align: right;">Page 76</p> <p>1 hosted by one of the plaintiffs'<br/> 2 attorneys, Mr. Sobol I think. And they<br/> 3 provided us with some IQVIA data --<br/> 4 I-Q-V-I-A data -- which we reviewed but<br/> 5 did not inform any of my opinions.<br/> 6 Q. What about the Pacific<br/> 7 Institute of Research and Evaluation?<br/> 8 A. No.<br/> 9 Q. When did you decide to<br/> 10 supplement your report the first time?<br/> 11 Again, if it's helpful to you, we can<br/> 12 turn to the first supplemental report, is<br/> 13 dated April 3rd, 2019.<br/> 14 A. There's only eight or<br/> 15 ten days between these two. So in the<br/> 16 first few days after the main report was<br/> 17 filed, I was contacted and told that<br/> 18 some -- some of our early work product,<br/> 19 graphs or tables from the ARCOS data, had<br/> 20 been used in depositions, and the<br/> 21 attorneys wanted me to supplement the<br/> 22 report adopting that work product. It is<br/> 23 our work product, but to acknowledge<br/> 24 that.</p> |
| <p style="text-align: right;">Page 75</p> <p>1 litigation, did you ever interact with<br/> 2 Compass Lexecon?<br/> 3 A. Yes.<br/> 4 Q. Okay. And what was the<br/> 5 nature of those interactions?<br/> 6 A. There were either one or two<br/> 7 brief conference calls with -- with one<br/> 8 or more of the plaintiffs' attorneys and<br/> 9 one or more consultants from Compass<br/> 10 Lexecon.<br/> 11 Q. Did they play any role in<br/> 12 the formation of your opinions or the<br/> 13 preparation of your reports?<br/> 14 A. No.<br/> 15 Q. What about Greylock<br/> 16 McKinnon, did you ever interact with them<br/> 17 in connection with the opioids<br/> 18 litigation?<br/> 19 A. Yes.<br/> 20 Q. Please describe the nature<br/> 21 of that interaction.<br/> 22 A. It was similar to the<br/> 23 interaction with Compass Lexecon. There<br/> 24 was one -- one very brief conference call</p>   | <p style="text-align: right;">Page 77</p> <p>1 And I believe that there was<br/> 2 some additional tables that could be<br/> 3 calculated, prepared, from the material<br/> 4 that's in the initial report, but we<br/> 5 hadn't produced it -- those tables in<br/> 6 that format, these highly summarized<br/> 7 tables.<br/> 8 And as I understood it, the<br/> 9 summaries of what we produced in the<br/> 10 initial report were being used by another<br/> 11 expert and we were asked to -- to create<br/> 12 the summaries -- recreate the summaries<br/> 13 from the underlying analysis in the<br/> 14 initial report.<br/> 15 So it all happened in a few<br/> 16 days after the initial report. We were<br/> 17 asked to make those two supplements.<br/> 18 Q. When you submitted your<br/> 19 March 25th report, did you already intend<br/> 20 to supplement at a later time?<br/> 21 A. No.<br/> 22 Q. You mentioned that you were<br/> 23 contacted and told regarding the use of<br/> 24 some of the materials at depositions, who</p>            |

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| <p style="text-align: right;">Page 78</p> <p>1 contacted you? Plaintiffs' counsel?</p> <p>2 A. Oh, yes. I believe</p> <p>3 Ms. Poerschke, but I'm not 100 percent</p> <p>4 certain.</p> <p>5 Q. You mentioned that in</p> <p>6 addition to the deposition materials, you</p> <p>7 also included some highly summarized</p> <p>8 tables. When did you make those tables,</p> <p>9 you or somebody else at your firm?</p> <p>10 A. Oh, shortly before</p> <p>11 April 3rd, 2019. In the -- in the few</p> <p>12 days preceding that date.</p> <p>13 Q. So those were prepared</p> <p>14 between the March 25th report and when</p> <p>15 those highly summarized tables came out</p> <p>16 in the supplemental report on April 3rd?</p> <p>17 A. Correct.</p> <p>18 Q. And you mentioned that some</p> <p>19 of your summary tables you came to</p> <p>20 understand were being used by another</p> <p>21 expert. Which expert?</p> <p>22 A. I'm not 100 percent certain,</p> <p>23 but I think it is Professor Cutler.</p> <p>24 Q. When did you decide to</p> | <p style="text-align: right;">Page 80</p> <p>1 MR. MOUGEY: Guys, somebody</p> <p>2 is still not on mute. If anybody</p> <p>3 can double-check who's not on</p> <p>4 mute. But there's continuous</p> <p>5 noise that's coming through.</p> <p>6 THE WITNESS: I'm sorry.</p> <p>7 Could you ask that again, please.</p> <p>8 BY MS. McENROE:</p> <p>9 Q. Absolutely. So when did you</p> <p>10 do the work that's reflected in the</p> <p>11 second supplemental report?</p> <p>12 A. Well, the underlying work</p> <p>13 goes back six, eight, ten months, right,</p> <p>14 because it's based on the analysis that</p> <p>15 was already done and reported out. In</p> <p>16 the March 25th report there is some</p> <p>17 additional work and it was done in the</p> <p>18 first two weeks of April. But most of</p> <p>19 it, most of the work that is underlying</p> <p>20 that second supplement is work that was</p> <p>21 done prior to March 25th. It was just</p> <p>22 addressing a different question.</p> <p>23 We were asked to take the</p> <p>24 data and the analysis that we previously</p>                                  |
| <p style="text-align: right;">Page 79</p> <p>1 submit your second supplemental report?</p> <p>2 And if it's helpful, the next blue sheet</p> <p>3 will be in front of the second</p> <p>4 supplement. And that's dated April 15,</p> <p>5 2019.</p> <p>6 MR. MOUGEY: Anybody is on</p> <p>7 the phone, if y'all can just mute</p> <p>8 it. The noise continues to come</p> <p>9 through.</p> <p>10 Thanks.</p> <p>11 BY MS. McENROE:</p> <p>12 Q. I can refine that question a</p> <p>13 little bit more.</p> <p>14 Did you decide to</p> <p>15 supplement, with your second supplemental</p> <p>16 report, after March 25th?</p> <p>17 A. Oh, yes, definitely.</p> <p>18 Q. Did you decide to supplement</p> <p>19 with your second supplemental expert</p> <p>20 report after April 3rd?</p> <p>21 A. Yes.</p> <p>22 Q. When did you do the work</p> <p>23 that's reflected in the second</p> <p>24 supplemental expert report?</p>   | <p style="text-align: right;">Page 81</p> <p>1 had done and address a slightly different</p> <p>2 question with the data. But most of the</p> <p>3 sort of underlying work had been done</p> <p>4 over the prior year.</p> <p>5 Q. Prior to the period between</p> <p>6 April 3rd and April 15th when you were</p> <p>7 running the reports that ended up being</p> <p>8 reflected in the second supplemental</p> <p>9 expert report, had you been processing</p> <p>10 data regarding the manufacturers as is</p> <p>11 now reflected in the second supplemental</p> <p>12 expert report, or did that all start in</p> <p>13 that more narrow window?</p> <p>14 A. We had done some work</p> <p>15 related to the manufacturers,</p> <p>16 memorialized in the March 25th report.</p> <p>17 And so some work done related to</p> <p>18 manufacturers before March 25th.</p> <p>19 Q. But of the information</p> <p>20 that's more uniquely in the second</p> <p>21 supplemental report, is that a new set of</p> <p>22 work that you did during that more narrow</p> <p>23 period of time, the April 3rd to</p> <p>24 April 15th window?</p> |

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| <p style="text-align: right;">Page 82</p> <p>1 A. Well, there is some<br/>         2 additional work. As I said, we had done<br/>         3 a lot of work related to the<br/>         4 manufacturers, a lot of it reported out<br/>         5 in the initial report. And I was asked<br/>         6 to provide answers to some questions that<br/>         7 that prior work would inform, but hadn't<br/>         8 been posed to me before sometime after<br/>         9 March 25th.</p> <p>10 Q. Aside from maybe having<br/>         11 forgotten to include certain materials in<br/>         12 your first supplemental report, is there<br/>         13 any reason why what's contained in your<br/>         14 first supplemental report could not have<br/>         15 been included in your March 25th report?</p> <p>16 A. I would take some of the<br/>         17 color out of your question. I didn't say<br/>         18 that I forgot to include something in the<br/>         19 initial report. But there's some<br/>         20 material there that was not included in<br/>         21 the initial report, like a discussion of<br/>         22 those demonstratives used in the<br/>         23 deposition, or the highly summarized<br/>         24 tables reflecting material that was in</p> | <p style="text-align: right;">Page 84</p> <p>1 it that day.</p> <p>2 I think that it's probably<br/>         3 true for the first supplemental report,<br/>         4 that if we had thought to include those<br/>         5 summary tables or to adopt the<br/>         6 demonstratives used in the deposition,<br/>         7 that could have been done quickly and<br/>         8 included in the initial report.</p> <p>9 Q. But is there any reason why<br/>         10 you could not have done the analysis you<br/>         11 did for the second supplemental report<br/>         12 earlier, such that that result could have<br/>         13 been reflected in the March 25th report?</p> <p>14 A. I'm sorry, what do you mean<br/>         15 by any reason?</p> <p>16 Q. So for example, we can take<br/>         17 a look. In the second supplemental<br/>         18 report at Paragraph 2, you have materials<br/>         19 considered -- sorry, materials reviewed,<br/>         20 specific to the second supplemental<br/>         21 report adding some things.</p> <p>22 None of those came to exist<br/>         23 for the first time after March 25th but<br/>         24 before April 15th, correct?</p> |
| <p style="text-align: right;">Page 83</p> <p>1 the March report.</p> <p>2 So kind of setting aside<br/>         3 some of the context that you put in your<br/>         4 question, I would say that if -- if I had<br/>         5 thought of or been instructed to include<br/>         6 the material that's in that first<br/>         7 supplemental, it could have been included<br/>         8 in the first report.</p> <p>9 Q. And same would be true of<br/>         10 the materials included in the second<br/>         11 supplemental report, correct?</p> <p>12 A. Well, it's a little<br/>         13 different. There's -- there's very<br/>         14 little additional work or thought in the<br/>         15 supplemental report. So it's material<br/>         16 that didn't require a lot of additional<br/>         17 work to produce the first supplemental.</p> <p>18 The second supplemental<br/>         19 involves more substantial thought on my<br/>         20 part and work on my staff's part.</p> <p>21 So I wouldn't say that as of<br/>         22 March 25th, if we had been asked to<br/>         23 produce the content that's in the second<br/>         24 supplemental report, we could have done</p>   | <p style="text-align: right;">Page 85</p> <p>1 A. Correct.</p> <p>2 Q. So you could have been<br/>         3 provided with this instruction and these<br/>         4 materials previously and could have<br/>         5 potentially included the opinions in your<br/>         6 second supplemental report in your<br/>         7 March 25th report, correct?</p> <p>8 A. Yes.</p> <p>9 MS. McENROE: We've been<br/>         10 going for about an hour. Take a<br/>         11 quick break?</p> <p>12 MR. MOUGEY: That sounds<br/>         13 good. What -- what's your<br/>         14 definition of quick?</p> <p>15 MS. McENROE: Let's go off<br/>         16 the record.</p> <p>17 THE VIDEOGRAPHER: Off the<br/>         18 record at 11:18 a.m.<br/>         19 (Short break.)</p> <p>20 THE VIDEOGRAPHER: We are<br/>         21 back on the record at 11:31 a.m.</p> <p>22 BY MS. McENROE:</p> <p>23 Q. I'd like to direct your<br/>         24 attention in your March 25th report to</p>   |

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| <p style="text-align: right;">Page 86</p> <p>1 Page 3, which is a continuation of<br/>                 2 Paragraph 9, which has a list of<br/>                 3 materials reviewed. Let me know when<br/>                 4 you're there.<br/>                 5 A. Yes.<br/>                 6 Q. Great. And take a look at<br/>                 7 the next page, it's a continuation of<br/>                 8 that list.<br/>                 9 And Item I you have listed<br/>                 10 as Masters Pharmaceutical, Inc., versus<br/>                 11 Drug Enforcement Administration; is that<br/>                 12 correct?<br/>                 13 A. Yes.<br/>                 14 Q. When did you first read<br/>                 15 Masters?<br/>                 16 A. Last spring or summer.<br/>                 17 Approximately a year ago.<br/>                 18 Q. Do you rely on it in any way<br/>                 19 in issuing your expert opinions?<br/>                 20 A. No, I don't think so.<br/>                 21 Q. You are not a lawyer,<br/>                 22 correct?<br/>                 23 A. Correct.<br/>                 24 Q. You don't apply caselaw in</p>  | <p style="text-align: right;">Page 88</p> <p>1 regulations in connection with forming<br/>                 2 the opinions in your expert reports?<br/>                 3 A. Not directly. There may be,<br/>                 4 at a second remove, an impact of a -- a<br/>                 5 regulation on my thinking. But -- the<br/>                 6 data, but not -- not directly.<br/>                 7 Q. What do you mean by second<br/>                 8 remove impact?<br/>                 9 A. Well, at a high level what I<br/>                 10 think I did was to determine whether the<br/>                 11 transactions that the defendants reported<br/>                 12 to the DEA in realtime match the<br/>                 13 transactions that they report to the<br/>                 14 court in this case.<br/>                 15 And there's a couple of<br/>                 16 different ways of thinking about that,<br/>                 17 framing that exercise.<br/>                 18 Q. Sure.<br/>                 19 A. But I understand that the<br/>                 20 defendants are required by regulation or<br/>                 21 law to report those transactions timely<br/>                 22 and accurately to the DEA through ARCOS.<br/>                 23 And so one interpretation of what I did<br/>                 24 was to -- to take the transactions that</p>   |
| <p style="text-align: right;">Page 87</p> <p>1 your analysis in your expert reports?<br/>                 2 A. I don't. If I do, it's<br/>                 3 inadvertent.<br/>                 4 Q. Okay. You also don't<br/>                 5 have -- you do not have listed here the<br/>                 6 Controlled Substances Act; is that<br/>                 7 correct?<br/>                 8 A. Correct.<br/>                 9 Q. Did you review that in whole<br/>                 10 or in part in connection with the opioids<br/>                 11 litigation work you've done?<br/>                 12 A. If I did, I don't recall.<br/>                 13 Q. Did you rely on it in any<br/>                 14 way with respect to any of the opinions<br/>                 15 you've put forth?<br/>                 16 A. No.<br/>                 17 Q. So you didn't review<br/>                 18 Title 21, Section 1301.74(b) from the<br/>                 19 Code of Federal Regulations, correct?<br/>                 20 A. Not that I'm aware of. If<br/>                 21 you put it in front of me, I may<br/>                 22 recognize the text. But I don't -- I<br/>                 23 don't recall it by that citation.<br/>                 24 Q. Well, did you rely on any</p> | <p style="text-align: right;">Page 89</p> <p>1 the defendants produced in this case, and<br/>                 2 determine whether the defendants produced<br/>                 3 their actual transactions in these 14<br/>                 4 opioids. And a way to do that is to say,<br/>                 5 well, in addition to whatever<br/>                 6 responsibility the defendants have to the<br/>                 7 court in this case, they had separate<br/>                 8 from that in realtime, a responsibility<br/>                 9 to report the transactions to ARCOS. And<br/>                 10 so I then compare those two datasets.<br/>                 11 So when I say sort of at a<br/>                 12 second remove, regulation may impact my<br/>                 13 opinion, it's at a -- a tenuous<br/>                 14 connection. What I'm really doing is<br/>                 15 just comparing two datasets. But my<br/>                 16 thinking about that is probably informed<br/>                 17 by an understanding that the defendants<br/>                 18 both had a responsibility to the court,<br/>                 19 and then, through regulation, had a<br/>                 20 responsibility to accurately and timely<br/>                 21 report their transactions.<br/>                 22 Q. When you say responsibility<br/>                 23 of the court, you are talking about in<br/>                 24 discovery in this litigation?</p> |



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| <p style="text-align: right;">Page 90</p> <p>1 A. Yes.</p> <p>2 Q. And you made mention that</p> <p>3 defendants are required by regulation to</p> <p>4 report their data timely and accurately.</p> <p>5 Are you referring to ARCOS when you made</p> <p>6 that statement?</p> <p>7 A. Yes.</p> <p>8 Q. Are you making any opinions</p> <p>9 in any of your expert reports whether any</p> <p>10 defendant did or did not comply with</p> <p>11 their reporting obligations vis-a-vis</p> <p>12 ARCOS?</p> <p>13 A. I don't think so. It's</p> <p>14 certainly not an opinion that I</p> <p>15 expressed. We see some gaps in the ARCOS</p> <p>16 data. But I don't know if that result --</p> <p>17 if that resulted from a defendant not --</p> <p>18 not timely reporting transactions or not.</p> <p>19 That's a slightly different question.</p> <p>20 Q. When you interacted with</p> <p>21 current or former DEA personnel with</p> <p>22 respect to the ARCOS data, did any of</p> <p>23 them tell you that any of the defendants</p> <p>24 did not meet their obligations with</p>                              | <p style="text-align: right;">Page 92</p> <p>1 regarding suspicious order monitoring.</p> <p>2 Did you review any in connection with</p> <p>3 forming any of your opinions?</p> <p>4 A. Not that I recall.</p> <p>5 Q. Okay.</p> <p>6 A. I'm sorry, the answer would</p> <p>7 definitely be no, because if I saw</p> <p>8 something like that, it didn't in any way</p> <p>9 inform any of my opinions. My opinions</p> <p>10 are really about the data. Not about --</p> <p>11 about some subject matter conduct by any</p> <p>12 of the parties.</p> <p>13 Q. Aside from any documents</p> <p>14 cited in your expert reports, did you</p> <p>15 review any documents produced by</p> <p>16 defendants regarding their own suspicious</p> <p>17 order monitoring programs?</p> <p>18 A. I don't think I did</p> <p>19 personally, but my staff did see some</p> <p>20 suspicious order monitoring reports. I</p> <p>21 know that we received some. They didn't</p> <p>22 inform any of my opinions.</p> <p>23 Q. Okay. What did they</p> <p>24 receive?</p> |
| <p style="text-align: right;">Page 91</p> <p>1 respect to reporting ARCOS data?</p> <p>2 A. No.</p> <p>3 Q. Are you making any opinions</p> <p>4 in any of your expert reports about</p> <p>5 defendants' failure to comply with their</p> <p>6 discovery obligations in this litigation?</p> <p>7 A. Well, it's not an opinion.</p> <p>8 I think some of our observations have</p> <p>9 informed further discovery production.</p> <p>10 And I expect may continue to.</p> <p>11 AmerisourceBergen provided</p> <p>12 data yesterday in discovery that we</p> <p>13 identified in the March 25th report</p> <p>14 hadn't been produced before. So I</p> <p>15 don't -- that's not an opinion really,</p> <p>16 but it -- it is a comment on the</p> <p>17 discovery, at least the production that</p> <p>18 we've received. And I expect there may</p> <p>19 be more production. But it's not -- it's</p> <p>20 not opinion.</p> <p>21 Q. Okay. You didn't list in</p> <p>22 your materials considered any, what we</p> <p>23 call "dear registrant" letters which are</p> <p>24 letters from the DEA to registrants</p> | <p style="text-align: right;">Page 93</p> <p>1 A. I don't know.</p> <p>2 Q. Do you know regarding which</p> <p>3 defendants?</p> <p>4 A. No. I'm sorry. I might</p> <p>5 have answered a little too quickly to the</p> <p>6 prior question.</p> <p>7 I think what my recollection</p> <p>8 is, that I was told, that we received</p> <p>9 kind of a hodge-podge of e-mails or</p> <p>10 memos, that the reporting wasn't</p> <p>11 particularly systematic or organized, to</p> <p>12 the best of my recollection.</p> <p>13 As I said, it didn't</p> <p>14 inform -- wasn't used in any way in my</p> <p>15 analysis and didn't inform in any way my</p> <p>16 opinions. But that's my recollection of</p> <p>17 what we received.</p> <p>18 Q. And are you referring to</p> <p>19 actual suspicious order reports or are</p> <p>20 you referring to suspicious order</p> <p>21 monitoring programming?</p> <p>22 I just want to make sure we</p> <p>23 are talking about the same thing.</p> <p>24 A. I've told you everything I</p>                        |

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| <p style="text-align: right;">Page 94</p> <p>1 know already on the subject. I can't<br/>2 qualify it any more than that.<br/>3 Q. Okay. Did you consider any<br/>4 documents relating to investigations that<br/>5 defendants may have done into potentially<br/>6 suspicious orders?<br/>7 A. No.<br/>8 Q. Did you consider any<br/>9 documents regarding audits of the<br/>10 suspicious order monitoring programs by<br/>11 DEA, Board of Pharmacy, or otherwise?<br/>12 A. No.<br/>13 Q. Did you review any<br/>14 communications between defendants, any of<br/>15 them, and the DEA?<br/>16 A. Only again at one step<br/>17 removed. The ARCOS data, 10 or 12 of the<br/>18 34 fields we received are transmitted by<br/>19 the defendants to the DEA. And so the<br/>20 source material that we received<br/>21 ultimately came in large part from the<br/>22 defendants, but by communication, if you<br/>23 mean letters or e-mails or analysis, no,<br/>24 I did not.</p>  | <p style="text-align: right;">Page 96</p> <p>1 that we would source ourselves during our<br/>2 work, researching the data that we<br/>3 receive. So just take for an example, D,<br/>4 E, F, G, H, those are all examples, as we<br/>5 were -- and B and C, these are all items<br/>6 that as we were developing the data last<br/>7 summer, we sourced without asking for it<br/>8 from the plaintiffs' counsel or the<br/>9 plaintiffs' counsel providing it to us<br/>10 without us asking for it, which were the<br/>11 two possibilities your question covered.<br/>12 Q. Thank you. So was there<br/>13 anything that you asked for in forming<br/>14 your opinions that plaintiffs' counsel<br/>15 did not give you?<br/>16 A. No, not that I can think of.<br/>17 Q. Let's take a quick look on<br/>18 Page 4 of your initial report. Paragraph<br/>19 13, under heading "Summary of Opinions."<br/>20 Do you see where I am?<br/>21 A. Yes.<br/>22 Q. Paragraph 13 says, "Based<br/>23 upon my comparison of the ARCOS data<br/>24 produced by the DEA and the public ARCOS</p> |
| <p style="text-align: right;">Page 95</p> <p>1 Q. Since issuing your original<br/>2 report or either of your two supplements,<br/>3 besides defendants having supplemented<br/>4 their transactional data, have you<br/>5 reviewed anything else regarding the<br/>6 opioids litigation, anything else<br/>7 produced in discovery?<br/>8 A. I don't think so.<br/>9 Q. The materials reflected in<br/>10 your materials reviewed section of your<br/>11 reports, are those materials that you<br/>12 asked for or are they materials that were<br/>13 provided to you without you asking for<br/>14 them?<br/>15 A. I'm sorry. I don't think I<br/>16 can answer the question the way that<br/>17 you've asked it. I can rephrase it for<br/>18 you if you like or you could --<br/>19 Q. Sure. As long as we do it<br/>20 relatively quickly.<br/>21 A. Well, it's neither, right.<br/>22 You asked me was it provided to me<br/>23 without me asking for it or did I ask for<br/>24 it. So most of those items are items</p> | <p style="text-align: right;">Page 97</p> <p>1 retail drug summary reports, I conclude<br/>2 that, after correcting a relatively small<br/>3 number of records, the ARCOS data<br/>4 produced by the DEA is reliable."<br/>5 Did I read that correctly?<br/>6 A. Yes.<br/>7 Q. And then if we go ahead to<br/>8 Paragraph 17, still under "Summary of<br/>9 Opinions," the first sentence there says,<br/>10 "I conclude from my review of the ARCOS<br/>11 data, the retail drug summary reports,<br/>12 and transaction data produced in<br/>13 discovery by the defendants, that the<br/>14 ARCOS data is reliable."<br/>15 Did I read that accurately?<br/>16 A. Yes.<br/>17 Q. And then that paragraph<br/>18 continues, correct?<br/>19 A. Yes.<br/>20 Q. So is it fair to say that<br/>21 you are of the opinion that the ARCOS<br/>22 data is generally reliable?<br/>23 THE WITNESS: Bless you.<br/>24 Yes, with the qualification</p>  |

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| <p style="text-align: right;">Page 98</p> <p>1 that I make throughout the report,<br/> 2 that is my opinion.<br/> 3 BY MS. McENROE:<br/> 4 Q. An in -- at, like, a<br/> 5 30,000-foot level, the sort of first half<br/> 6 of your report is largely taking<br/> 7 transactional data that defendants have<br/> 8 produced in this litigation, comparing it<br/> 9 to the ARCOS data to help you form that<br/> 10 opinion that ARCOS data is reliable?<br/> 11 I'm not trying to make this<br/> 12 one a trick question. If you want to<br/> 13 describe it a different way, go ahead.<br/> 14 A. I would -- I would just add<br/> 15 to that a comparison with the retail drug<br/> 16 summary reports, which is what we looked<br/> 17 at on Paragraph 13. But if you add<br/> 18 comparing the ARCOS data that we received<br/> 19 from the DEA, the retail drug summary<br/> 20 reports, and the defendant transaction<br/> 21 data, comparing those three views of what<br/> 22 should be the same underlying data, we<br/> 23 think that at least those three views are<br/> 24 consistent, is how I would describe it.</p> | <p style="text-align: right;">Page 100</p> <p>1 separately?<br/> 2 A. Well, there's some<br/> 3 technology there that I may be challenged<br/> 4 to describe. So the easiest way for me<br/> 5 to think about the data we received is<br/> 6 the ARCOS data was received on DVDs or<br/> 7 hard drives.<br/> 8 Q. Yep.<br/> 9 A. And then some additional<br/> 10 production was received through some<br/> 11 internet-based technology shared between<br/> 12 the plaintiffs' counsel and my office. I<br/> 13 wasn't directly involved in the<br/> 14 transmission, so there's some technical<br/> 15 details there that I'm not familiar with.<br/> 16 Q. Did your office have access<br/> 17 to the defendants' overall production, so<br/> 18 more than what was produced for<br/> 19 transactional data?<br/> 20 A. Yes.<br/> 21 Q. Did your office go looking<br/> 22 at things more than the transactional<br/> 23 data?<br/> 24 A. Yes.</p>  |
| <p style="text-align: right;">Page 99</p> <p>1 Q. And to maybe put a finer<br/> 2 point on it, that is the analysis<br/> 3 conducted in Section 5, I believe, of<br/> 4 your report; is that correct? Five and<br/> 5 six?<br/> 6 A. Five and six. Yes.<br/> 7 Q. Great. And so the purposes<br/> 8 of Sections 5 and 6 are both to reach<br/> 9 that conclusion that we were just<br/> 10 discussing; is that correct?<br/> 11 A. Well, there's a little bit<br/> 12 more to it than that. But as you said,<br/> 13 at a high level, I think that's fair.<br/> 14 Q. Okay. So you got<br/> 15 defendants' transactional data, and you<br/> 16 got different data from each of the<br/> 17 defendants' production. Is that fair to<br/> 18 say?<br/> 19 A. Yes.<br/> 20 Q. And how did you get access<br/> 21 to defendants' productions? Did you have<br/> 22 access to the production database of the<br/> 23 documents produced directly from<br/> 24 defendants or was it provided to you</p>  | <p style="text-align: right;">Page 101</p> <p>1 Q. What did they go looking at?<br/> 2 A. Well, we -- we talked a<br/> 3 little bit earlier about the suspicious<br/> 4 order reports, what I'm calling generally<br/> 5 the suspicious order reports. That would<br/> 6 be one example.<br/> 7 I can't think of other<br/> 8 examples as I'm sitting here. But I'm<br/> 9 sure there is other material besides the<br/> 10 individual defendant transaction data and<br/> 11 the suspicious order reports, what I'm<br/> 12 referring to generally and somewhat<br/> 13 vaguely, because it's just my<br/> 14 understanding of how to describe some set<br/> 15 of e-mails or reports on suspicious order<br/> 16 monitoring.<br/> 17 Chargeback data is another<br/> 18 example. We don't use the chargeback<br/> 19 data very much. But that's another<br/> 20 example of data that was produced by the<br/> 21 defendants, as I understand it.<br/> 22 What additional categories<br/> 23 of documents or data my staff might have<br/> 24 looked at, I don't -- I don't know. I</p> |

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| <p style="text-align: right;">Page 102</p> <p>1 have described what I can recall.</p> <p>2 Q. And did you look at any of</p> <p>3 the suspicious order reports documents,</p> <p>4 as you've described them?</p> <p>5 A. I don't recall. If I did,</p> <p>6 it was just on a screen. It wasn't</p> <p>7 something that was printed off or a</p> <p>8 binder or, you know, a folder. It was</p> <p>9 seeing what looked like an e-mail or a</p> <p>10 memo or something like that, looking over</p> <p>11 the shoulder of one of my staff and being</p> <p>12 told that's what the suspicious order</p> <p>13 files look like.</p> <p>14 Q. Does that inform any of your</p> <p>15 opinions in your report?</p> <p>16 A. No.</p> <p>17 Q. Take a look at Page 29 of</p> <p>18 your first report, Paragraph 29</p> <p>19 coincidentally. I'm sorry. Footnote 29</p> <p>20 is what I meant.</p> <p>21 A. Yes.</p> <p>22 Q. So the footnote says, "The</p> <p>23 13 defendants are ANDA,</p> <p>24 AmerisourceBergen, Cardinal Health, CVS,</p>                    | <p style="text-align: right;">Page 104</p> <p>1 A. We notified the plaintiffs</p> <p>2 of the deficiencies in the data just as</p> <p>3 we did for some of the other defendants.</p> <p>4 Q. Okay. And plaintiffs did</p> <p>5 not come back to you specifically with</p> <p>6 respect to Rite Aid with clarification</p> <p>7 regarding the location of the Rite Aid</p> <p>8 data in the production database?</p> <p>9 A. Not that I recall.</p> <p>10 Q. Footnote 30 says, "For</p> <p>11 example, Rite Aid only produced</p> <p>12 transactions for 2007 and only for</p> <p>13 hydrocodone, 9193."</p> <p>14 Then it keeps going.</p> <p>15 A. Yes.</p> <p>16 Q. In a number of your charts</p> <p>17 you put N/A for certain Rite Aid entries,</p> <p>18 because presumably you didn't have that</p> <p>19 data. Do you recall that?</p> <p>20 A. No.</p> <p>21 Q. So for example, see if I</p> <p>22 can -- take a look at Page 63. You'll</p> <p>23 see Rite Aid is third from the bottom</p> <p>24 above the total?</p> |
| <p style="text-align: right;">Page 103</p> <p>1 Discount Drug Mart, HBC, Henry Schein, HD</p> <p>2 Smith, McKesson, Prescription Supply,</p> <p>3 Rite Aid, Walgreens and Walmart.</p> <p>4 "I do not discuss the data</p> <p>5 produced by Rite Aid or Henry Schein</p> <p>6 because the produced data was</p> <p>7 insufficient to compare with the ARCOS</p> <p>8 data.</p> <p>9 "Rite Aid did not produce</p> <p>10 the buyers' DEA numbers, and the data</p> <p>11 produced by Rite Aid does not identify</p> <p>12 which counties are included in the data.</p> <p>13 "Henry Schein did not</p> <p>14 include the buyers DEA number or NDCs."</p> <p>15 And then you go on to say,</p> <p>16 "Appendix 7 lists the data fields</p> <p>17 provided by each defendant. I have</p> <p>18 standardized the names of the field to</p> <p>19 simplify the presentation."</p> <p>20 Did I read that correctly?</p> <p>21 A. Yes.</p> <p>22 Q. What did you do to seek out,</p> <p>23 if anything, the data produced by Rite</p> <p>24 Aid and Henry Schein?</p> | <p style="text-align: right;">Page 105</p> <p>1 A. Yes.</p> <p>2 Q. And you have N/A for</p> <p>3 oxycodone, morphine, hydrocodone,</p> <p>4 oxymorphone.</p> <p>5 Do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. For Rite Aid?</p> <p>8 Did you understand or have</p> <p>9 any understanding that Rite Aid did not</p> <p>10 distribute any of those specific drugs?</p> <p>11 A. I don't know one way or</p> <p>12 the -- the other, but if that's the case,</p> <p>13 then N/A would cover it.</p> <p>14 Q. Would it properly be zero as</p> <p>15 opposed to N/A, if you knew that?</p> <p>16 A. I don't know. I'd have to</p> <p>17 think about that.</p> <p>18 Q. Let's take a look at your</p> <p>19 resumé. Hold on one second.</p> <p>20 (Document marked for</p> <p>21 identification as Exhibit</p> <p>22 McCann-4.)</p> <p>23 BY MS. McENROE:</p> <p>24 Q. I'm going to mark this as</p>   |

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1 Exhibit 4, which I believe is Appendix 1  
2 to your March 25th report.  
3 A. Thank you.  
4 Q. Great. Thank you.  
5 And I'll represent to you  
6 that this is what you had included as  
7 Appendix 1. Does this look familiar?  
8 A. Yes.  
9 Q. Is there anything you'd like  
10 to correct in Exhibit 4, or is it all  
11 right if we consider this to be your  
12 qualifications and experiences?  
13 A. There -- there, of course,  
14 would be a couple of additional entries.  
15 The two -- if we were preparing this  
16 report -- this resumé today rather than  
17 on March 25th, it would be the two  
18 supplemental reports, and then I gave a  
19 deposition last week or the week before  
20 in the case that's third down on -- on  
21 Page 97, the SEC V RPM.  
22 Other than that, I -- I'm  
23 not aware of any changes that I would  
24 make to it.

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1 Q. So you have a Bachelor's  
2 degree, a Master's degree, and a Ph.D.;  
3 is that correct?  
4 A. Correct.  
5 Q. And your Ph.D. is in  
6 economics, correct?  
7 A. Correct.  
8 Q. Okay. You are not a medical  
9 doctor, correct?  
10 A. Correct.  
11 Q. You did not attend medical  
12 school?  
13 A. Correct.  
14 Q. You are not a physician's  
15 assistant?  
16 A. Correct.  
17 Q. You are not licensed to  
18 write prescriptions?  
19 A. Correct.  
20 Q. You are not a pharmacist?  
21 A. Correct.  
22 Q. Fair to say you're not an  
23 expert in healthcare or the healthcare  
24 industry?

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1 A. Yes.  
2 Q. Fair to say that you do not  
3 have professional experience with  
4 suspicious order monitoring?  
5 A. Yes.  
6 Q. You have not been involved  
7 in designing a suspicious order  
8 monitoring program, correct?  
9 A. Correct.  
10 Q. You have not reviewed  
11 guidance from the DEA regarding  
12 suspicious order monitoring, correct?  
13 A. Correct.  
14 Q. You are not experienced with  
15 supply chain; is that correct?  
16 So what I mean by that is  
17 the moving of products along a supply  
18 chain, like in this case,  
19 pharmaceuticals, are you an expert in  
20 that?  
21 A. Yeah, I was going to say,  
22 I'm -- I'm familiar with the concept.  
23 And a little bit familiar with operations  
24 research. But I would not call myself an

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1 expert in supply chain management.  
2 Q. Would you consider yourself  
3 an expert in suspicious order monitoring?  
4 A. No.  
5 Q. Would you consider yourself  
6 an expert in issues from -- relating to  
7 the Drug Enforcement Agency?  
8 MR. MOUGEY: Objection.  
9 THE WITNESS: That's a  
10 little too broad a question.  
11 There may be some aspects that I  
12 would be an expert in, for  
13 instance, the -- the aspects that  
14 I actually address in my expert  
15 report, which is the assessment of  
16 the data.  
17 But if you mean something  
18 more specific to the DEA as  
19 opposed to the data that the DEA  
20 produced to me, then I would  
21 say -- I would agree with you,  
22 what -- whatever the implication  
23 was of your question.  
24 BY MS. McENROE:



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| <p style="text-align: right;">Page 110</p> <p>1 Q. Sure. And so I can say it<br/> 2 another way. You've never worked at the<br/> 3 DEA, correct?<br/> 4 A. Correct.<br/> 5 Q. You've never worked at the<br/> 6 FDA?<br/> 7 A. Correct.<br/> 8 Q. You've never worked at the<br/> 9 CDC?<br/> 10 A. Correct.<br/> 11 Q. Do you have any<br/> 12 healthcare-related experience, aside from<br/> 13 being potentially a consumer of<br/> 14 healthcare, that's not reflected in your<br/> 15 Appendix 1 to your expert report?<br/> 16 A. No.<br/> 17 Q. Is it fair to say that the<br/> 18 vast majority of your professional<br/> 19 experience relates to securities-related<br/> 20 issues?<br/> 21 Or I can say that a<br/> 22 different way if you'd prefer.<br/> 23 And I think I've seen you<br/> 24 having written this a number of times.</p>  | <p style="text-align: right;">Page 112</p> <p>1 identification as Exhibit<br/> 2 McCann-5.)<br/> 3 BY MS. McENROE:<br/> 4 Q. I'm going to hand you what<br/> 5 I'm marking as Exhibit 5, which is<br/> 6 Appendix 2 to your March 25th report.<br/> 7 A. Thank you.<br/> 8 Q. Sure. And let's take a look<br/> 9 together at Paragraph 191. So this is<br/> 10 just an example.<br/> 11 And I'm going to be<br/> 12 starting, a couple lines down, there's a<br/> 13 sentence towards the end of the line that<br/> 14 starts "I reviewed the ingredient base<br/> 15 weights."<br/> 16 Do you see that?<br/> 17 A. Yes.<br/> 18 Q. Okay. And it says, "I<br/> 19 reviewed the ingredient base weights in<br/> 20 the NDC dictionary for all NDCs with<br/> 21 dosage units in the ARCOS data and<br/> 22 flagged ingredient base weights as<br/> 23 potentially incorrect, if the weight of<br/> 24 the drug per dosage form, e.g., capsule,</p>  |
| <p style="text-align: right;">Page 111</p> <p>1 That the majority of your consulting work<br/> 2 since you left the SEC has primarily<br/> 3 involved the analysis of investments.<br/> 4 Is that a true statement?<br/> 5 A. Yes.<br/> 6 Q. This case does not involve<br/> 7 the analysis of investments, correct?<br/> 8 A. Correct.<br/> 9 Q. Do you know what the word<br/> 10 "anhydrous" means?<br/> 11 A. Someone told me and I forget<br/> 12 right now. It's not something that --<br/> 13 that I recall.<br/> 14 Q. In your report, you have<br/> 15 certain statements with regards to<br/> 16 certain drug weights or the makeup of<br/> 17 certain pharmaceuticals. Do you have<br/> 18 personal knowledge on which you can be<br/> 19 making those statements?<br/> 20 A. I'm sorry, could you give me<br/> 21 an example?<br/> 22 Q. Sure. So let's take a<br/> 23 look -- let's do Appendix 2.<br/> 24 (Document marked for</p> | <p style="text-align: right;">Page 113</p> <p>1 tablet, patch, was significantly<br/> 2 different than the other drug products<br/> 3 with the same base drug and dosage<br/> 4 strength."<br/> 5 Do you see that?<br/> 6 A. I do.<br/> 7 Q. What methodology did you use<br/> 8 to make those determinations?<br/> 9 A. Well, I compared NDCs with<br/> 10 the same active ingredient, the same drug<br/> 11 code, and noted that for some NDCs, the<br/> 12 ingredient base weights were orders of<br/> 13 magnitude different than other NDCs for<br/> 14 the same drug code.<br/> 15 So to give you a simple<br/> 16 example, if I may. There might be an NDC<br/> 17 for a package of 10 pills and an NDC code<br/> 18 for a package of 30 identical pills. And<br/> 19 the -- the base weights for those two<br/> 20 packages should be in that same<br/> 21 proportion, three to one. And there are<br/> 22 just a handful of examples, maybe a dozen<br/> 23 or two dozen examples, where -- where<br/> 24 there appears to be an error.</p> |

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| <p style="text-align: right;">Page 114</p> <p>1 We actually see some of<br/> 2 those errors being corrected over time in<br/> 3 the NDC dictionary. Because if you<br/> 4 access the NDC dictionary today it will<br/> 5 be slightly different than the NDC<br/> 6 dictionary that you accessed a year ago.<br/> 7 And so we give you an<br/> 8 example in the next -- I give you an<br/> 9 example in the next paragraph of exactly<br/> 10 what I'm describing.<br/> 11 Q. Did you do anything other<br/> 12 than consult with the dictionary to check<br/> 13 that that methodology was appropriate or<br/> 14 correct?<br/> 15 A. Well, yes, you can see in<br/> 16 Footnote 62 I'm referencing an appendix<br/> 17 to the ARCOS handbook that is sort of an<br/> 18 independent check on the calculation that<br/> 19 I did. So we've -- we first, when we got<br/> 20 the ARCOS data, and checked some of the<br/> 21 calculated base weights in the ARCOS data<br/> 22 against the ingredient base weight in the<br/> 23 NDC dictionary, we found some patterns<br/> 24 like the pattern I just described to you</p> | <p style="text-align: right;">Page 116</p> <p>1 Did you exclude any other<br/> 2 entries aside from that one obvious<br/> 3 error?<br/> 4 A. At some points in our<br/> 5 report, certainly yes, as I described in<br/> 6 the early part of the report when I'm<br/> 7 summarizing the data as we received it<br/> 8 from ARCOS. I forget the tables exactly,<br/> 9 but we could look at them if you like.<br/> 10 As we go from Table 3 to 4, or something<br/> 11 like that, I condensed some of the ARCOS<br/> 12 data, for example, excluding reverse<br/> 13 distributors from an intermediate<br/> 14 discussion of the data because there are<br/> 15 examples where -- where there's a<br/> 16 manufacturer shipment to a reverse<br/> 17 distributor of -- I'll make the number<br/> 18 up -- but 1,000 units. And the same NDC<br/> 19 code with the same quantity but a<br/> 20 different unit code is shipped from the<br/> 21 reverse distributor to an analytical lab.<br/> 22 The reverse distributor and<br/> 23 the manufacturer in my example are both<br/> 24 reporting that first transaction, but the</p> |
| <p style="text-align: right;">Page 115</p> <p>1 across those two NDC codes.<br/> 2 And from that and from some<br/> 3 additional analysis, we see a, depending<br/> 4 on the drug code, a factor or a ratio<br/> 5 between the stated strength and the<br/> 6 ingredient base weight.<br/> 7 And then later we -- we<br/> 8 verified those with the ratios described<br/> 9 in Appendix 3 of the ARCOS handbook.<br/> 10 Q. Can you turn to Paragraph<br/> 11 204 in that Exhibit 5.<br/> 12 A. Yes.<br/> 13 Q. In the section headed<br/> 14 "Transactions with Obvious Errors in<br/> 15 Quantity."<br/> 16 A. Yes.<br/> 17 Q. It says, "I also exclude<br/> 18 transactions with obvious errors in<br/> 19 quantity. For example, I exclude a<br/> 20 single sale transaction of<br/> 21 hydrocodone/APAP tablets from a<br/> 22 distributor to a practitioner in the<br/> 23 Northern Mariana Island that has<br/> 24 calculated base rate of 34 metric tons."</p>  | <p style="text-align: right;">Page 117</p> <p>1 reverse distributor is putting in the<br/> 2 wrong unit code and reporting a base<br/> 3 weight or implying a base weight --<br/> 4 Q. Sir, I'm sorry to interrupt<br/> 5 you. But we're a little short on time,<br/> 6 so I just want to make sure.<br/> 7 It looks, in this Appendix<br/> 8 2, that you've differentiated<br/> 9 transactions involving reverse<br/> 10 distributors, analytical labs, importers,<br/> 11 exporters, or researchers from<br/> 12 transactions with obvious errors in<br/> 13 quantities. In this section, you walk<br/> 14 through methodologically -- sorry, lost<br/> 15 the word -- of how you got through this<br/> 16 data.<br/> 17 And I'm asking specifically<br/> 18 with respect to transactions with obvious<br/> 19 errors in quantity, whether you know if<br/> 20 you've excluded any others on that<br/> 21 specific basis.<br/> 22 A. I'm sorry. I wasn't at a<br/> 23 period. If I could just have a few more<br/> 24 words to complete my sentence.</p>  |

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| <p style="text-align: right;">Page 118</p> <p>1 Q. No, I'm sorry. I'm sorry.<br/>                 2 Special Master Cohen has ruled, at least<br/>                 3 at the deposition of Dr. Eagleman, that<br/>                 4 we're entitled to cut you off. And I can<br/>                 5 say for the record, the record can<br/>                 6 reflect, that your answer was not<br/>                 7 complete.<br/>                 8 MR. MOUGEY: Special Master<br/>                 9 Cohen -- that you can cut the<br/>                 10 witness off in the middle of a --<br/>                 11 MS. McENROE: Correct, and<br/>                 12 we can just consider it --<br/>                 13 MR. MOUGEY: -- on a<br/>                 14 response to a question.<br/>                 15 MS. McENROE: Yes. Yes. We<br/>                 16 are very limited by time.<br/>                 17 MR. MOUGEY: If you can show<br/>                 18 me the --<br/>                 19 MS. McENROE: I certainly<br/>                 20 can get you --<br/>                 21 MR. MOUGEY: That would be<br/>                 22 great. So we can cut each other<br/>                 23 off during the course of the<br/>                 24 depositions --</p>   | <p style="text-align: right;">Page 120</p> <p>1 A. I believe there are others.<br/>                 2 But they are de minimus. I don't recall<br/>                 3 another example as I sit here, besides<br/>                 4 the one that I give you there.<br/>                 5 Q. Okay. Let's turn to<br/>                 6 Paragraph 121 on Page 50 of your<br/>                 7 March 25th report. So that will be in<br/>                 8 the bound document there.<br/>                 9 So on Page 50, that last<br/>                 10 line in Paragraph 21 (sic) there's a<br/>                 11 sentence that starts with<br/>                 12 "buprenorphine."<br/>                 13 Do you see that?<br/>                 14 A. Yes.<br/>                 15 Q. Okay. "Buprenorphine and<br/>                 16 fentanyl have a large MME relative to<br/>                 17 their dosage units because both are<br/>                 18 prescribed as skin patches, which<br/>                 19 dispense the drug for up to one week."<br/>                 20 Do you see that?<br/>                 21 A. Yes.<br/>                 22 Q. And you have no citation<br/>                 23 there, right?<br/>                 24 A. Correct.</p>  |
| <p style="text-align: right;">Page 119</p> <p>1 MS. McENROE: We can.<br/>                 2 MR. MOUGEY: And we can<br/>                 3 give -- the witness can't give an<br/>                 4 opportunity to --<br/>                 5 MS. McENROE: At my peril.<br/>                 6 MR. MOUGEY: -- to answer<br/>                 7 the question?<br/>                 8 MS. McENROE: At my peril,<br/>                 9 that his answer is not complete.<br/>                 10 I'm just trying to make sure -- he<br/>                 11 wasn't answering the correct<br/>                 12 question because he was answering<br/>                 13 a different question. So I'm<br/>                 14 trying to make sure that we<br/>                 15 preserve our time.<br/>                 16 BY MS. McENROE:<br/>                 17 Q. So with respect specifically<br/>                 18 to Subsection F here, transactions with<br/>                 19 obvious errors in quantity. Taking into<br/>                 20 account that you have your other sections<br/>                 21 talking about other corrections you've<br/>                 22 made to the data, can you recall any<br/>                 23 other specific obvious errors with<br/>                 24 quantity that you corrected?</p> | <p style="text-align: right;">Page 121</p> <p>1 Q. Do you know if there are<br/>                 2 other formulations of buprenorphine or<br/>                 3 fentanyl?<br/>                 4 A. Yes.<br/>                 5 Q. And how do you know that?<br/>                 6 A. From the NDC dictionary.<br/>                 7 Q. Do you know about drug or<br/>                 8 pharmaceutical formulations other than<br/>                 9 from the NDC dictionary or the ARCOS<br/>                 10 registrant handbook? Do you have other<br/>                 11 professional or educational experience on<br/>                 12 which to base the statements that you put<br/>                 13 in your report along those lines?<br/>                 14 A. No.<br/>                 15 Q. What is -- do you know what<br/>                 16 it means for a drug to be Schedule I,<br/>                 17 Schedule II, III, IV, V?<br/>                 18 A. Generally, but not part of<br/>                 19 my -- as part of my expert experience or<br/>                 20 opinion.<br/>                 21 Q. Are you aware that the only<br/>                 22 drugs at issue in this litigation are a<br/>                 23 particular set of opioid pain medications<br/>                 24 that are or ever have been Schedule II?</p> |

| Page 122   | Page 124   |
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| <p>1 A. Yes.</p> <p>2 Q. From my understanding, you</p> <p>3 include codeine in your analysis; is that</p> <p>4 correct?</p> <p>5 A. Yes.</p> <p>6 Q. Including certain</p> <p>7 formulations with -- involving codeine</p> <p>8 that are and have always been a Schedule</p> <p>9 III; is that correct?</p> <p>10 A. I'm not sure. That, I</p> <p>11 think, goes beyond my expertise. What</p> <p>12 I've done is I've analyzed the data that</p> <p>13 the DEA produced and that the defendants</p> <p>14 produced.</p> <p>15 Q. Right. But you're not using</p> <p>16 all of the data that the DEA and the</p> <p>17 defendants produced in your analysis,</p> <p>18 right? You're picking certain of the</p> <p>19 data for your analysis? So, for example,</p> <p>20 you exclude certain treatment-related</p> <p>21 medications from some of your analysis,</p> <p>22 right?</p> <p>23 A. I think that's a different</p> <p>24 issue. But yeah, some of the tables do</p>  | <p>1 (Whereupon, a discussion was</p> <p>2 held off the record.)</p> <p>3 - - -</p> <p>4 (Lunch break.)</p> <p>5 - - -</p> <p>6 AFTERNOON SESSION</p> <p>7 - - -</p> <p>8 THE VIDEOGRAPHER: We are</p> <p>9 back on the record at 1:03 p.m.</p> <p>10 - - -</p> <p>11 EXAMINATION (Cont'd.)</p> <p>12 - - -</p> <p>13 BY MS. McENROE:</p> <p>14 Q. Hi, Dr. McCann, thank you</p> <p>15 for joining us again.</p> <p>16 I'd like to direct your</p> <p>17 attention, in your March 25th report,</p> <p>18 which I think is Exhibit 3 if I'm</p> <p>19 recounting correctly.</p> <p>20 A. Yes.</p> <p>21 Q. Great. Could you please</p> <p>22 turn to Page 6 which is Paragraph 21.</p> <p>23 A. Yes.</p> <p>24 Q. And it says in Section 9, if</p>  |
| Page 123   | Page 125   |
| <p>1 not include two treatment drugs.</p> <p>2 Q. Did you intend to include</p> <p>3 Schedule III drugs that are not within</p> <p>4 the scope of this litigation in your</p> <p>5 analysis?</p> <p>6 A. I intended to analyze all of</p> <p>7 the data that the DEA produced and that</p> <p>8 the individual defendants produced</p> <p>9 regardless of what schedule they were on.</p> <p>10 It's just reporting of the data for the</p> <p>11 benefit of the court.</p> <p>12 Q. So if the data was produced</p> <p>13 by the DEA but does not concern a drug</p> <p>14 that's at issue in this litigation, it's</p> <p>15 possible that could be accounted for in</p> <p>16 your analysis?</p> <p>17 A. I would say it a little bit</p> <p>18 differently. If it's a drug that was</p> <p>19 produced by the DEA and by the individual</p> <p>20 defendants, it's in our analysis.</p> <p>21 MS. McENROE: Can we go off</p> <p>22 the record for a second.</p> <p>23 THE VIDEOGRAPHER: Off the</p> <p>24 record at 12:13 p.m.</p> | <p>1 I'm getting my Roman numerals correct; is</p> <p>2 that right?</p> <p>3 A. Yes.</p> <p>4 Q. Okay. "In Section 9, I</p> <p>5 describe a nonexhaustive set of</p> <p>6 algorithms that can be systematically</p> <p>7 applied to the ARCOS data and present a</p> <p>8 check on the various estimates presented.</p> <p>9 In Section 10, I provide certain</p> <p>10 estimates regarding the total aggregate</p> <p>11 shipments of opioids into Ohio from 1997</p> <p>12 to 2018. In Section 11, I describe</p> <p>13 certain charts and tables that are</p> <p>14 attached to this report. In Section 12,</p> <p>15 I give my conclusions."</p> <p>16 Did I read that correctly?</p> <p>17 A. Yes.</p> <p>18 Q. Okay. And you say in that</p> <p>19 first sentence that you're describing a</p> <p>20 nonexhaustive set of algorithms that can</p> <p>21 be systematically applied to the ARCOS</p> <p>22 data.</p> <p>23 Are you planning to apply</p> <p>24 any other algorithms not articulated in</p> |

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| <p style="text-align: right;">Page 126</p> <p>1 your March 25th report or either of your<br/> 2 supplements to the ARCOS data in this<br/> 3 litigation?<br/> 4 A. Not as I sit here.<br/> 5 Q. And when you say that, you<br/> 6 say because you might do some later, but<br/> 7 you haven't been asked to yet?<br/> 8 A. Right. It's not something I<br/> 9 intend to do or that I am contemplating<br/> 10 as I sit here. But there might be<br/> 11 additional facts developed or there might<br/> 12 be some instruction from the court or for<br/> 13 some other reason, another alternative<br/> 14 may come to mind that I would develop and<br/> 15 implement. But I -- I don't have<br/> 16 anything in mind, as I sit here.<br/> 17 Q. So even though you say that<br/> 18 in Section 9 you are describing a<br/> 19 nonexhaustive set of algorithms, you're<br/> 20 not meaning that to say that you have not<br/> 21 listed all the algorithms that are<br/> 22 forming your opinions in this report in<br/> 23 this report?<br/> 24 A. Correct.</p> | <p style="text-align: right;">Page 128</p> <p>1 computer, a sort of old school computer,<br/> 2 that -- that you are taking in the data,<br/> 3 processing it and putting out output in<br/> 4 your opinions?<br/> 5 A. Yes. Exactly.<br/> 6 Q. Okay. And you're not saying<br/> 7 that the sort of black box that data is<br/> 8 going into is the right or the only<br/> 9 algorithm to be used on that data. You<br/> 10 are just the one who is actually doing<br/> 11 the calculations; is that correct?<br/> 12 A. Well, close. It's not a<br/> 13 black box at all. A black box is<br/> 14 something where something -- data goes in<br/> 15 and results come out and you can't tell<br/> 16 what's happening. In fact, this is not a<br/> 17 black box. It's the opposite of that.<br/> 18 I'm describing for you in<br/> 19 detail, I think, exactly what's being<br/> 20 done to the data. I don't take a<br/> 21 position on whether -- which or if any of<br/> 22 these algorithms and the associated<br/> 23 assumptions are appropriate, I think was<br/> 24 the word you used earlier?</p> |
| <p style="text-align: right;">Page 127</p> <p>1 Q. And you say that the<br/> 2 algorithms can be systematically applied.<br/> 3 Do you see where it says that?<br/> 4 A. Yes.<br/> 5 Q. And in saying can be<br/> 6 systematically applied, are you saying<br/> 7 that they are appropriate or should be<br/> 8 applied or -- are you taking that<br/> 9 opinion?<br/> 10 A. No, I think that would get<br/> 11 into some subject matter expertise that<br/> 12 I'm not claiming to have. I was asked to<br/> 13 implement these algorithms, which at some<br/> 14 broad level, has some assumptions. And<br/> 15 then make an additional assumption or<br/> 16 two, apply it to the data and report out<br/> 17 the results. And that's what I've done.<br/> 18 Q. So speaking in a broad<br/> 19 level, which I think makes sense to start<br/> 20 and then we'll get a little bit more<br/> 21 specific.<br/> 22 And I don't mean this to be<br/> 23 pejorative in any way. But is it fair to<br/> 24 say that you are serving in a role like a</p>            | <p style="text-align: right;">Page 129</p> <p>1 Q. Yep.<br/> 2 A. I'm just saying that you<br/> 3 take the -- the data that we've prepped,<br/> 4 and apply these formulas to it, you get<br/> 5 particular results.<br/> 6 Q. And is that also true not<br/> 7 only about whether those algorithms, the<br/> 8 assumptions, are appropriate, but also<br/> 9 true that you are not making any opinion<br/> 10 as to whether they are legally required?<br/> 11 A. Right. I think all of these<br/> 12 issues are being handled by other<br/> 13 experts. I -- as you said a minute ago.<br/> 14 And I didn't take it as a pejorative.<br/> 15 I'm just serving as a calculator.<br/> 16 Q. And in this Paragraph 21 you<br/> 17 use the -- the phrase "algorithms" to<br/> 18 discuss what's being applied in<br/> 19 Section 9. But you also use the word<br/> 20 "approaches" later I believe.<br/> 21 Are you saying the same<br/> 22 thing?<br/> 23 So are -- in -- calling it<br/> 24 algorithms here in Paragraph 21, are you</p>  |



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| <p style="text-align: right;">Page 130</p> <p>1 describing what you later in your report<br/> 2 call an approach, Approach 1, Approach 2,<br/> 3 Approach 3?<br/> 4 A. Yes.<br/> 5 Q. Let's take a look at<br/> 6 Section 9. So in particular I'll point<br/> 7 you to Paragraph 130, which is -- starts<br/> 8 on Page 56.<br/> 9 Are you there?<br/> 10 A. Yes.<br/> 11 Q. Great. And the section<br/> 12 heading is "Transaction Analysis."<br/> 13 Do you see that?<br/> 14 A. Yes.<br/> 15 Q. And this is what we were<br/> 16 just referring to when we were talking<br/> 17 about the algorithms?<br/> 18 A. Yes.<br/> 19 Q. And Paragraph 130 starts, "I<br/> 20 implemented various approaches to<br/> 21 identify transactions meeting specified<br/> 22 criteria using the non-public ARCOS data<br/> 23 from 2006 to 2014, supplemented with<br/> 24 defendant transaction data where the</p>   | <p style="text-align: right;">Page 132</p> <p>1 Q. Okay. And you didn't -- you<br/> 2 didn't apply any other criteria?<br/> 3 A. Not that I can think of.<br/> 4 Q. Okay. In that Paragraph 130<br/> 5 that I just read out, you say at the<br/> 6 beginning that you implemented various<br/> 7 approaches. And is that talking about<br/> 8 the approaches that are discussed later<br/> 9 in that section, Approaches 1, 2, 3, 4<br/> 10 and 5?<br/> 11 A. Yes.<br/> 12 Q. You are not talking about<br/> 13 anything else than that?<br/> 14 A. Correct.<br/> 15 Q. And then you have five<br/> 16 approaches in this report; is that<br/> 17 correct?<br/> 18 A. Yes.<br/> 19 Q. And the first one is the<br/> 20 maximum monthly trailing six-month<br/> 21 threshold, correct?<br/> 22 A. Correct.<br/> 23 Q. And the second is the twice<br/> 24 trailing 12-month average pharmacy dosage</p> |
| <p style="text-align: right;">Page 131</p> <p>1 ARCOS data is obviously missing<br/> 2 transactions that are included in the<br/> 3 transactions produced by defendants in<br/> 4 discovery, and to the extent I have<br/> 5 defendant transaction data for the<br/> 6 periods before 2006 and after 2014, I<br/> 7 calculated the results separately for<br/> 8 each of the 12 controlled substance drug<br/> 9 codes."<br/> 10 Do you see that?<br/> 11 A. Yes.<br/> 12 Q. And then you have a footnote<br/> 13 there that "you do not analyze<br/> 14 transactions in two treatment drugs,<br/> 15 buprenorphine and methadone."<br/> 16 Do you see that?<br/> 17 A. Yes.<br/> 18 Q. How did you pick that list<br/> 19 of 12 controlled drug codes?<br/> 20 A. Well, by taking the 14 drug<br/> 21 codes we received from the DEA and<br/> 22 excluding the two, what I understand to<br/> 23 be treatment drugs identified in<br/> 24 Footnote 54.</p> | <p style="text-align: right;">Page 133</p> <p>1 units, correct?<br/> 2 A. Yes.<br/> 3 Q. And we can do it slower,<br/> 4 sorry, you're flipping through.<br/> 5 MR. MOUGEY: Which page are<br/> 6 you referencing?<br/> 7 MS. McENROE: I'm just going<br/> 8 through a list of them, but --<br/> 9 MR. MOUGEY: Right.<br/> 10 MS. McENROE: -- that's<br/> 11 fine.<br/> 12 BY MS. McENROE:<br/> 13 Q. The third one starts on<br/> 14 Page 64. So the third one is the three<br/> 15 times trailing 12-month average pharmacy<br/> 16 dosage units; is that correct?<br/> 17 A. Yes.<br/> 18 Q. The fourth one starts on<br/> 19 Page 68, is the maximum 8,000 dosage<br/> 20 units monthly; is that correct?<br/> 21 A. Yes.<br/> 22 Q. And the fifth one, starts on<br/> 23 Page 72, is maximum daily dosage units.<br/> 24 Do you see that?</p>   |

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| <p style="text-align: right;">Page 134</p> <p>1 A. I do.</p> <p>2 Q. So if I refer to your five</p> <p>3 approaches, will you understand that I'm</p> <p>4 referring to those five approaches as</p> <p>5 I've just read them out?</p> <p>6 A. Yes.</p> <p>7 Q. Did you apply any other</p> <p>8 approaches aside from those five in</p> <p>9 reaching your conclusions?</p> <p>10 A. Not with respect to the</p> <p>11 conclusions I reached in Section 9 at</p> <p>12 least.</p> <p>13 Q. Okay. From where did you</p> <p>14 get the five approaches that you apply in</p> <p>15 Section 9?</p> <p>16 A. From discussions with</p> <p>17 counsel.</p> <p>18 Q. Who? Is it the same list of</p> <p>19 people that we discussed earlier today?</p> <p>20 A. Yes. There may be some</p> <p>21 additional lawyers whose names didn't</p> <p>22 come to mind when I was giving you the</p> <p>23 names of people I interacted with</p> <p>24 earlier.</p>                    | <p style="text-align: right;">Page 136</p> <p>1 Q. Okay. So just so that I can</p> <p>2 make sure that I have it all straight.</p> <p>3 So you got the five approaches from</p> <p>4 plaintiffs' counsel, and you applied them</p> <p>5 to the data, and that's it, with respect</p> <p>6 to Section 9?</p> <p>7 A. Correct.</p> <p>8 Q. So it's fair to say that any</p> <p>9 one of these approaches could be or could</p> <p>10 not be appropriate for use in this</p> <p>11 particular setting; you're just not</p> <p>12 taking an opinion on that one way or the</p> <p>13 other?</p> <p>14 A. Right. I think other</p> <p>15 witnesses are going to deal with that</p> <p>16 issue.</p> <p>17 Q. And just to make sure I'm</p> <p>18 totally clear, you're not opining</p> <p>19 anywhere that any of these approaches is</p> <p>20 or is not required by law in any way?</p> <p>21 A. Correct.</p> <p>22 Q. I think you mentioned</p> <p>23 earlier that there are certain</p> <p>24 assumptions that are built into your</p> |
| <p style="text-align: right;">Page 135</p> <p>1 Q. Anyone come to mind?</p> <p>2 A. It would be -- it would be</p> <p>3 something like that list and perhaps</p> <p>4 more.</p> <p>5 Q. Anyone in particular that</p> <p>6 you think you left out earlier that comes</p> <p>7 to mind?</p> <p>8 A. No.</p> <p>9 Q. Did you get any input on</p> <p>10 these five approaches from any of your</p> <p>11 discussions with current or former DEA</p> <p>12 agents?</p> <p>13 A. No.</p> <p>14 Q. Did you take any other step</p> <p>15 to verify with the DEA that any or all of</p> <p>16 these approaches are appropriate in this</p> <p>17 setting?</p> <p>18 A. I'm sorry. I don't know</p> <p>19 what you mean by any other, but I didn't</p> <p>20 do anything other than serve as the</p> <p>21 computer, you referred to me as earlier.</p> <p>22 I took these approaches and implemented</p> <p>23 them, applied them to the data. That's</p> <p>24 what I did.</p> | <p style="text-align: right;">Page 137</p> <p>1 approaches. Do you remember mentioning</p> <p>2 that?</p> <p>3 A. Yes.</p> <p>4 Q. Let's take a look at Page</p> <p>5 100 -- sorry, Paragraph 131 of your</p> <p>6 report.</p> <p>7 This is under the Heading A,</p> <p>8 "Maximum Monthly Trailing Six-Month</p> <p>9 Thresholds."</p> <p>10 Do you see that?</p> <p>11 A. Yes.</p> <p>12 Q. Okay. And in this</p> <p>13 paragraph, it starts, "Under the first</p> <p>14 approach, I identify transactions that</p> <p>15 cause the number of dosage units shipped</p> <p>16 by a distributor to a pharmacy in a</p> <p>17 calendar month to exceed the highest</p> <p>18 number of dosage units shipped by the</p> <p>19 distributor to the pharmacy in any one of</p> <p>20 the six preceding calendar months."</p> <p>21 Did I read that correctly?</p> <p>22 A. Yes.</p> <p>23 Q. And then you go on and you</p> <p>24 have an example, right? It says, "For</p>  |

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| <p style="text-align: right;">Page 138</p> <p>1 example, if the number of dosage units<br/> 2 containing hydrocodone shipped from a<br/> 3 distributor to a pharmacy in February,<br/> 4 March, April, May, June, and July, were<br/> 5 5,000, 10,000, 7,000, 8,000, 9,000, and<br/> 6 9,500 respectively, a requested<br/> 7 transaction in August would be flagged,<br/> 8 if it would cause the number of dosage<br/> 9 units containing hydrocodone, the<br/> 10 distributorship to the pharmacy, to<br/> 11 exceed 10,000."<br/> 12 Did I read that correctly?<br/> 13 A. Yes.<br/> 14 Q. And then it continues, "Any<br/> 15 reported transactions containing<br/> 16 hydrocodone on that date and all reported<br/> 17 transactions containing hydrocodone from<br/> 18 that distributor to that pharmacy<br/> 19 thereafter are flagged."<br/> 20 Did I read that correctly?<br/> 21 A. Yes.<br/> 22 Q. And is that all part of an<br/> 23 approach that came from plaintiffs'<br/> 24 counsel? So that's what they asked you</p>                | <p style="text-align: right;">Page 140</p> <p>1 Paragraph 132 also from direction of<br/> 2 counsel?<br/> 3 A. Yeah, so I might shorten<br/> 4 that sentence up a great deal, because<br/> 5 there's some of that sentence that's not<br/> 6 necessary to describe our implementation.<br/> 7 Q. Explain to me what you mean<br/> 8 by that.<br/> 9 A. Well, as it's written, as I<br/> 10 wrote it --<br/> 11 Q. Yeah.<br/> 12 A. -- I said counsel asked me<br/> 13 to assume that the distributor did not<br/> 14 effectively investigate the flagged<br/> 15 transactions. And so every subsequent<br/> 16 transaction of that drug code is also<br/> 17 flagged because the distributor had an<br/> 18 unfulfilled obligation to detect and<br/> 19 investigate the first flagged<br/> 20 transaction.<br/> 21 Operationally, you could<br/> 22 condense that to just say, I was asked to<br/> 23 flag every subsequent transaction after<br/> 24 the first transaction is flagged. It</p>   |
| <p style="text-align: right;">Page 139</p> <p>1 to do in this approach?<br/> 2 A. I'm pausing just for a<br/> 3 second to make sure when you say, is that<br/> 4 all, prior to the instruction that I got<br/> 5 from counsel, I think the answer is yes.<br/> 6 Q. Paragraph 132 says, "In this<br/> 7 approach and the others implemented<br/> 8 below" -- just pausing there for a<br/> 9 second. The others implemented below are<br/> 10 the rest of the five approaches in this<br/> 11 Section 9; is that correct?<br/> 12 A. Yes.<br/> 13 Q. So it says, "In this<br/> 14 approach, and the others implemented<br/> 15 below, I have been asked by counsel to<br/> 16 assume that the distributor did not<br/> 17 effectively investigate the flagged<br/> 18 transactions, and so every subsequent<br/> 19 transaction of that drug code is also<br/> 20 flagged because the distributor had an<br/> 21 unfulfilled obligation to detect and<br/> 22 investigate the first flagged<br/> 23 transaction."<br/> 24 Is that assumption made in</p> | <p style="text-align: right;">Page 141</p> <p>1 doesn't need the rest of the context to<br/> 2 describe the calculation that I did.<br/> 3 It's there because I'm sort<br/> 4 of describing my understanding, but it's<br/> 5 not necessary to describe the<br/> 6 calculations. Just if you hit a flag,<br/> 7 everything after that is flagged. And<br/> 8 some other witness will deal with whether<br/> 9 there was effective due diligence and<br/> 10 whether in the absence of that there was<br/> 11 an ongoing duty that should trigger a<br/> 12 flag on all the subsequent transactions.<br/> 13 Q. Is it your assertion after<br/> 14 the because -- so where it says -- you<br/> 15 know, it says the first part that you<br/> 16 were just reading, and then it says,<br/> 17 "Because the distributor had an<br/> 18 unfulfilled obligation to detect and<br/> 19 investigate the first flagged<br/> 20 transactions."<br/> 21 Is that coming from you or<br/> 22 is that coming from plaintiffs' counsel,<br/> 23 the reasoning of the because?<br/> 24 A. It's coming from the</p> |

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| <p style="text-align: right;">Page 142</p> <p>1 plaintiffs' counsel. I don't -- you<br/>         2 know, I was asked to assume everything<br/>         3 that's in that sentence, including that<br/>         4 last clause that you've read.<br/>         5 Q. And just so I make sure that<br/>         6 I understand, that assumption -- that is,<br/>         7 flagging every subsequent transaction for<br/>         8 that specific drug after you have a<br/>         9 flagged transaction -- you apply across<br/>         10 all five of the methodologies or<br/>         11 approaches used in Section 9; is that<br/>         12 correct?<br/>         13 A. Correct.<br/>         14 Q. For every distributor, for<br/>         15 each of the drugs that you use or<br/>         16 manufacture as appropriate for the second<br/>         17 supplemental report?<br/>         18 A. Correct.<br/>         19 Q. So that I understand and<br/>         20 make sure we're totally clear. You have<br/>         21 a methodology that you explain here in<br/>         22 Paragraph 131 regarding the maximum<br/>         23 monthly trailing six-month threshold; is<br/>         24 that correct? We were just talking about</p> | <p style="text-align: right;">Page 144</p> <p>1 application of the rule.<br/>         2 Q. I see. Okay. So I see. So<br/>         3 I just want to make sure that the<br/>         4 transactions that come later could be<br/>         5 more than the trailing six months before<br/>         6 it or they could be lower than the<br/>         7 trailing six months before it, but<br/>         8 they're flagged because they are coming<br/>         9 after one triggering entry?<br/>         10 A. Correct.<br/>         11 Q. And did you do the analysis,<br/>         12 if you didn't use that assumption about<br/>         13 the subsequent flagging after you have<br/>         14 one triggering entry about how many of<br/>         15 the entries would be flagged or not<br/>         16 flagged if you didn't use that<br/>         17 assumption?<br/>         18 MR. MOUGEY: Objection.<br/>         19 THE WITNESS: I'm sorry,<br/>         20 could you repeat that again?<br/>         21 BY MS. McENROE:<br/>         22 Q. Sure.<br/>         23 A. The static is --<br/>         24 BY MS. McENROE:</p>  |
| <p style="text-align: right;">Page 143</p> <p>1 that.<br/>         2 A. Yes.<br/>         3 Q. Okay. And then once you<br/>         4 have a triggering entry, the rest of them<br/>         5 are flagged. Do you apply that maximum<br/>         6 monthly trailing six-month threshold to<br/>         7 those remaining subsequent transactions<br/>         8 in any way?<br/>         9 A. Yes.<br/>         10 Q. And how is that? Because if<br/>         11 they seem that you have a triggering and<br/>         12 the rest of them are all just flagged,<br/>         13 are you doing the analysis of the rest of<br/>         14 them, of which ones should be flagged and<br/>         15 which ones should not?<br/>         16 A. No. The end of your prior<br/>         17 question was "in any way." And what I<br/>         18 meant by saying yes to that is that those<br/>         19 subsequent transactions are only flagged<br/>         20 because of the application of that rule,<br/>         21 having flagged one transaction. Anything<br/>         22 after that is flagged. So they are<br/>         23 affected, the identification of those<br/>         24 transactions are affected by the</p>                | <p style="text-align: right;">Page 145</p> <p>1 Q. It's a little distracting.<br/>         2 MS. McENROE: Anybody on the<br/>         3 line, if you can make sure to mute<br/>         4 yourself, that would be greatly<br/>         5 helpful.<br/>         6 Thank you.<br/>         7 BY MS. McENROE:<br/>         8 Q. So my question is this, did<br/>         9 you run an analysis applying any of your<br/>         10 approaches to the transactions that are<br/>         11 flagged because of the assumption based<br/>         12 on them being subsequent transactions to<br/>         13 one that had been flagged, to see what<br/>         14 proportion of those would be flagged or<br/>         15 not flagged in their own right regardless<br/>         16 of the assumption about the first<br/>         17 triggering transaction?<br/>         18 MR. MOUGEY: Objection.<br/>         19 THE WITNESS: Not for<br/>         20 purposes of this report. And --<br/>         21 and in some prior analysis of the<br/>         22 data, getting to understand the<br/>         23 data, we did some variations like<br/>         24 what you described. I don't know</p> |

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| <p style="text-align: right;">Page 146</p> <p>1 if it's exactly what you<br/> 2 described. But we -- we did other<br/> 3 analysis.<br/> 4 BY MS. McENROE:<br/> 5 Q. Without that assumption<br/> 6 about the first triggering transaction<br/> 7 flagging the remainders?<br/> 8 A. Correct.<br/> 9 Q. Across the different -- the<br/> 10 five different approaches?<br/> 11 A. I don't recall whether that<br/> 12 is correct or not.<br/> 13 Q. So you don't know one way or<br/> 14 the other, but you may have?<br/> 15 A. Correct.<br/> 16 Q. And do you have a sense of<br/> 17 the difference that this one assumption<br/> 18 makes about flagging the subsequent<br/> 19 transactions in terms of the number of<br/> 20 transactions or the proportion of<br/> 21 transactions that are flagged?<br/> 22 MR. MOUGEY: Objection.<br/> 23 THE WITNESS: I have some<br/> 24 general intuition. I don't</p>   | <p style="text-align: right;">Page 148</p> <p>1 Q. What do you mean by a<br/> 2 flagged transaction?<br/> 3 A. Well, for my purposes it's<br/> 4 just a -- an example we were looking at a<br/> 5 minute ago, a fairly simple, if-then<br/> 6 step. I think of everything I -- I've<br/> 7 done here in terms of what you can do in<br/> 8 Excel. And so imagine that you've got<br/> 9 numbers in two columns and you've got a<br/> 10 rule that says if Column A exceeds<br/> 11 Column B, put a one in that cell. And I<br/> 12 would think of that one as a flag. And<br/> 13 the absence of that one, signifying that<br/> 14 A does not exceed B, being an unflagged<br/> 15 transaction.<br/> 16 And then it's only a slight<br/> 17 further modification to say in that third<br/> 18 column, it's a one if A exceeds B or if<br/> 19 the column above -- the value above is<br/> 20 one. And then you would just fill in<br/> 21 ones in every cell after the first time A<br/> 22 exceeds B.<br/> 23 And all I mean by flagging<br/> 24 is that it's got that checkmark or one</p> |
| <p style="text-align: right;">Page 147</p> <p>1 have -- I don't -- I don't have a<br/> 2 quantified answer for you. But I<br/> 3 have a general intuition.<br/> 4 BY MS. McENROE:<br/> 5 Q. What's your general<br/> 6 intuition?<br/> 7 A. Well, because for most of<br/> 8 these defendants, you see a substantial<br/> 9 increase over time, especially leading up<br/> 10 to 2010 or 2011. If you reset that<br/> 11 trailing six-month maximum to be the<br/> 12 maximum of the most recent six months,<br/> 13 then you end up with fewer transactions<br/> 14 being flagged.<br/> 15 Q. Okay. So it would be a<br/> 16 downward trend if you took away the<br/> 17 assumption about the subsequent<br/> 18 transactions being flagged?<br/> 19 A. Correct.<br/> 20 Q. We've been using the<br/> 21 terminology of a transaction being<br/> 22 flagged. And that's language you used in<br/> 23 your report as well, correct?<br/> 24 A. Correct.</p> | <p style="text-align: right;">Page 149</p> <p>1 for that transaction and everything that<br/> 2 follows it.<br/> 3 Q. Are you of the opinion that<br/> 4 a flagged transaction means that that<br/> 5 transaction represents a suspicious<br/> 6 order?<br/> 7 A. That's way beyond my report,<br/> 8 I think.<br/> 9 Q. Are you --<br/> 10 A. I'm sorry, I apologize. I<br/> 11 don't have an opinion one way or the<br/> 12 other. If -- if you inferred from my<br/> 13 answer that I think it means that it is<br/> 14 not a suspicious order, I didn't mean<br/> 15 that. I just mean I don't have an<br/> 16 opinion one way or the other.<br/> 17 Q. Understood. But just to<br/> 18 make sure we are speaking the same<br/> 19 language. It's fair to say that you are<br/> 20 not taking the opinion that a flagged<br/> 21 transaction is necessarily a suspicious<br/> 22 order?<br/> 23 A. Correct.<br/> 24 Q. And it's also fair to say</p>   |



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1 that you are not saying that a flagged  
2 transaction is necessarily illegal or  
3 representative of illegal conduct?  
4 A. Correct.  
5 Q. It's also fair to say that a  
6 flagged transaction in your opinion does  
7 not necessarily mean there's been a  
8 failure of due diligence?  
9 A. Correct.  
10 Q. I want to take a look real  
11 quick specifically at this first  
12 approach, the maximum monthly trailing  
13 six-month threshold.  
14 And I want to -- your --  
15 your -- strike that.  
16 Your example here is very  
17 helpful for understanding it, so I  
18 appreciate that.  
19 But I want to get an  
20 understanding for, in practical terms,  
21 various of the defendants for different  
22 reasons may have gaps in their data. So  
23 for example, they may have been serving a  
24 pharmacy for a period of time, the

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1 pharmacy switched to a different  
2 distributor, and then went back to that  
3 distributor.  
4 Are you familiar with those  
5 kinds of changes or variations in the  
6 data, just speaking generally?  
7 A. Yes.  
8 Q. Okay. How were gaps in the  
9 data or entries without anything included  
10 handled in figuring out the maximum  
11 monthly trailing six-month threshold?  
12 A. I'm sorry, I don't think I'm  
13 understanding that question.  
14 Q. Sure. So I have a  
15 hypothetical for you. We can try and  
16 walk through it to see if that helps to  
17 clarify.  
18 A. Okay.  
19 Q. We have a pharmacy  
20 purchasing from a distributor in January  
21 through June, let's say of 2007. I'm  
22 just picking a year. But does not  
23 purchase from that distributor from July  
24 through December of 2007. Okay? So

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1 there's been a gap there.  
2 If the pharmacy purchases  
3 from the distributor again in  
4 January 2008, how do you set that  
5 threshold when you pick up again with the  
6 distribution to that pharmacy?  
7 A. Well, that's a good  
8 question. That's a hypothetical I hadn't  
9 thought of. I'd have to look at the data  
10 and see the -- and see how -- how  
11 significant that is.  
12 A slight variant on your  
13 hypothetical would be if -- if the  
14 pharmacy had bought from the distributor,  
15 let's say in four of the previous six  
16 months, then it would be just as I  
17 described it there in the example. If  
18 you imagine in -- in March and May the  
19 quantity is zero, so that the quantities  
20 are 5,000, 7,000, 9,000, and 9,500, then  
21 it still would be the case that if a  
22 transaction in August put you past, in  
23 this hypothetical, 9,500, not 10,000, you  
24 would flag the transaction.

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1 So blanks in the six-month  
2 window don't affect the calculation. The  
3 conditional statement is still, if the  
4 cumulative transactions that month exceed  
5 the highest of the preceding six calendar  
6 months, you flag the transaction.  
7 We don't ever flag a  
8 transaction in the first -- at least  
9 under this methodology, in the first six  
10 months of the purchases from a  
11 distributor. But if a pharmacy is buying  
12 from a distributor and then there's a gap  
13 of greater than six months, six months or  
14 greater, I'd have to think through and  
15 maybe just check and see how that is  
16 handled. It -- whether we handle it as  
17 restarting the clock, but I just don't  
18 recall as I sit here.  
19 Q. Do you know if you guys  
20 input, you and your staff I should say,  
21 input any threshold or baseline, if there  
22 was no data included, so you would pick a  
23 number and put it in there?  
24 A. No, not for that purpose.

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| <p style="text-align: right;">Page 154</p> <p>1 There is another slight -- you'll see<br/> 2 in -- in the code, besides what's<br/> 3 described here, an assumption that's a<br/> 4 little bit conservative. You have to<br/> 5 exceed the prior six months maximum and<br/> 6 also exceed a thousand pills in my<br/> 7 recollection, a thousand dosage units.<br/> 8 So if you were -- if your<br/> 9 transactions were 100, 100, 100, 100,<br/> 10 200, we don't flag that transaction. So<br/> 11 there are sort of de minimus quantities<br/> 12 that are not being flagged. But I don't<br/> 13 recall anything else.<br/> 14 Q. And with the application of<br/> 15 these approaches to the data, am I<br/> 16 correct that you were limiting the<br/> 17 analysis to shipments from distributors<br/> 18 to pharmacies and excluding other<br/> 19 shipments, for example, to hospitals and<br/> 20 clinics or other practitioners?<br/> 21 A. In Section 9, that's<br/> 22 correct.<br/> 23 Q. Across all five of the<br/> 24 approaches?</p>  | <p style="text-align: right;">Page 156</p> <p>1 A. Right.<br/> 2 Q. Okay. And so I also just<br/> 3 want to get an understanding. A number<br/> 4 of your approaches use months as a unit.<br/> 5 A. Correct.<br/> 6 Q. Did you use calendar months?<br/> 7 A. Yes.<br/> 8 Q. Okay. So you didn't use<br/> 9 30 days as a more standardized month?<br/> 10 A. I don't know if more<br/> 11 standardized, but we're using calendar<br/> 12 months.<br/> 13 Q. Calendar months. Okay. So<br/> 14 some could be 28 days or 31 days. It<br/> 15 could vary depending on whatever that<br/> 16 month is?<br/> 17 A. Correct.<br/> 18 Q. And that's true for each of<br/> 19 the approaches in Section 9 that uses a<br/> 20 month unit; is that fair?<br/> 21 A. Yes.<br/> 22 Q. We talked a little bit<br/> 23 earlier. You are not a pharmacist,<br/> 24 correct?</p> |
| <p style="text-align: right;">Page 155</p> <p>1 A. Yeah. So at least that was<br/> 2 our -- our intention was to only include<br/> 3 retail and chain pharmacies, to exclude<br/> 4 mail order pharmacies and what is<br/> 5 referred to, I think, as closed door<br/> 6 pharmacies.<br/> 7 Q. What do you mean by closed<br/> 8 door pharmacies?<br/> 9 A. Well, they would be things<br/> 10 like long-term care facilities perhaps,<br/> 11 or -- I don't know if you're from the<br/> 12 area, but near where I live there's a<br/> 13 Sunrise assisted living facility that I<br/> 14 drive past every day. And I think that's<br/> 15 my next home. And I think that there are<br/> 16 other locations of Sunrise around here.<br/> 17 And in my mind, anyway, when<br/> 18 I refer to closed door pharmacy, I'm<br/> 19 thinking about a facility like that that<br/> 20 may have received drugs and sent them out<br/> 21 to patients in a residence and affiliated<br/> 22 facilities, but they're not taking<br/> 23 walk-in customers, if you will.<br/> 24 Q. Sure. Off the street.</p> | <p style="text-align: right;">Page 157</p> <p>1 A. Correct.<br/> 2 Q. Have you ever worked in a<br/> 3 pharmacy?<br/> 4 A. No.<br/> 5 Q. Aside from being a customer<br/> 6 at a pharmacy, do you have any<br/> 7 professional experience with pharmacies?<br/> 8 A. No.<br/> 9 Q. Fair to say that you are not<br/> 10 an expert in pharmacy practice?<br/> 11 A. Yes.<br/> 12 Q. And you're not an expert in<br/> 13 pharmacy business?<br/> 14 A. Correct.<br/> 15 Q. Fair to say you're not an<br/> 16 expert of wholesale pharmaceutical<br/> 17 distribution?<br/> 18 A. Yes.<br/> 19 Q. Fair to say you're not an<br/> 20 expert in pharmacy manufacture?<br/> 21 A. Yes.<br/> 22 Q. Have you -- strike that.<br/> 23 In your report, I don't see<br/> 24 anything making reference to the business</p>   |

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1 of pharmacy, so how pharmacies conduct  
2 their business, for example how  
3 frequently they order drugs. Did you do  
4 any research or take in that -- take  
5 those issues into account in any way in  
6 your opinions?  
7 MR. MOUGEY: Objection.  
8 THE WITNESS: Yes, at least  
9 in some sense.  
10 BY MS. McENROE:  
11 Q. And I can make it a little  
12 bit of a crisper question. So have you  
13 undertaken any study to understand how  
14 pharmacies go about ordering drugs from a  
15 distributor?  
16 A. No.  
17 Q. Do you have any  
18 understanding of how frequently  
19 pharmacies order drugs from a  
20 distributor?  
21 A. Yes.  
22 Q. And do you have any  
23 understanding that some pharmacies could  
24 be on a set schedule, like a weekly

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1 schedule?  
2 A. Yes.  
3 Q. And so using your calendar  
4 month approach, would it be fair to say  
5 that you could, for example, have some  
6 months where a pharmacy might have four  
7 orders and some months where a pharmacy  
8 might have five orders in that specific  
9 month?  
10 A. Yes.  
11 Q. Did you take that into  
12 account in any way when you used your  
13 monthly based approaches in Section 9?  
14 A. Yes.  
15 Q. How did you do that?  
16 A. Well, if -- if there are  
17 five orders in a month in the first six  
18 months or in the trailing six months, the  
19 sum of those five shipments are in that  
20 threshold, the month's total. And that  
21 may or may not be the highest of the six  
22 months totals.  
23 And if the month that you're  
24 looking at, in comparison to the prior

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1 six months has either four or five weekly  
2 orders in your hypothetical, then they're  
3 all included.  
4 Q. Right. So I understand that  
5 they get swept into the analysis because  
6 that's just the way that the calendar  
7 works, and they're part of those months.  
8 But did you correct it out in any way to  
9 more than standardize the fact that some  
10 months may look bigger than other months  
11 in your monthly based analyses in Section  
12 9 because of the different variation of  
13 how many weeks could be in a month?  
14 A. No, but I reject your color  
15 in that question. I don't see anything  
16 needs to be corrected. So when you say  
17 did you correct something out, I'm  
18 acknowledging that in -- in 12 months,  
19 covering 52 weeks, some of those months  
20 have four weeks in them, or you know,  
21 some of them have five weeks, some of  
22 them have five Thursdays, some have four  
23 Thursday. I don't think that's something  
24 to be connected. It's a fact of the

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1 data.  
2 And my read of the -- of the  
3 data is as I described it, it's calendar  
4 months, there's nothing to be connected.  
5 MS. McENROE: Okay. For the  
6 record. I strike -- I move to  
7 strike everything after "no."  
8 Thank you.  
9 BY MS. McENROE:  
10 Q. And so do you account in any  
11 way in your analyses for legitimate  
12 pharmacy growth over time?  
13 A. Well, I'm not a subject  
14 matter expert or a lawyer. When you say  
15 legitimate growth, I don't think that's a  
16 question that I can answer for you.  
17 Q. Sure. So let me restate the  
18 question a little bit differently. So  
19 you're not a pharmacy business expert,  
20 but you own a business, right?  
21 A. Correct.  
22 Q. And you've operated in the  
23 business world. You've been an expert in  
24 certain securities-related issues in the

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| <p style="text-align: right;">Page 162</p> <p>1 business world; is that correct?</p> <p>2 A. Yes.</p> <p>3 Q. And you understand that over</p> <p>4 time, businesses can grow, not saying</p> <p>5 that they have to, that would be nice,</p> <p>6 but they can grow, right?</p> <p>7 A. Yes.</p> <p>8 Q. And there can be perfectly</p> <p>9 legitimate reasons for that. For</p> <p>10 example, your own consultancy has gotten</p> <p>11 bigger over time, I presume?</p> <p>12 A. Yes.</p> <p>13 Q. Do you agree that there</p> <p>14 could be perfectly legitimate reasons why</p> <p>15 a pharmacy business might grow over time?</p> <p>16 MR. MOUGEY: Objection.</p> <p>17 BY MS. McENROE:</p> <p>18 Q. You may answer.</p> <p>19 A. Yes.</p> <p>20 Q. Have you done any analysis</p> <p>21 of the DEA's quotas for opioids over</p> <p>22 time?</p> <p>23 A. No.</p> <p>24 Q. Do you have any</p>  | <p style="text-align: right;">Page 164</p> <p>1 Q. It says, "Twice trailing</p> <p>2 12-month average pharmacy dosage units."</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. Great. And so Paragraph 136</p> <p>6 says, "I identified transactions that</p> <p>7 cause the number of dosage units shipped</p> <p>8 by a distributor to a pharmacy in a</p> <p>9 calendar month to exceed twice the</p> <p>10 trailing 12-month average dosage units to</p> <p>11 retail and chain pharmacies served by the</p> <p>12 distributor. I have been asked by</p> <p>13 counsel to assume that the distributor</p> <p>14 did not effectively investigate the</p> <p>15 flagged transactions, and so every</p> <p>16 subsequent transaction of that drug code</p> <p>17 is also flagged because the distributor</p> <p>18 had an unfulfilled obligation to detect</p> <p>19 and investigate the first flagged</p> <p>20 transaction."</p> <p>21 Did I read that correctly?</p> <p>22 A. Yes.</p> <p>23 Q. So the first sentence of</p> <p>24 Paragraph 136 is explaining what I'm</p> |
| <p style="text-align: right;">Page 163</p> <p>1 understanding of what that means?</p> <p>2 A. No.</p> <p>3 Q. In any of your approaches</p> <p>4 discussed in Section 9 of your report,</p> <p>5 did you take into account or analyze in</p> <p>6 any way how natural disasters or other</p> <p>7 changes may have impacted your output?</p> <p>8 So for example, if there was a hurricane</p> <p>9 in a certain area or something of the</p> <p>10 like?</p> <p>11 MR. MOUGEY: Objection.</p> <p>12 THE WITNESS: Not that I</p> <p>13 could think of as I sit here.</p> <p>14 BY MS. McENROE:</p> <p>15 Q. Okay. Do you have an</p> <p>16 understanding that there could be a</p> <p>17 legitimate reason why a pharmacy may have</p> <p>18 a spike in its needs?</p> <p>19 A. Yes.</p> <p>20 Q. Let's turn to Paragraph 136.</p> <p>21 So we're going to move into Approach</p> <p>22 Number 2. And this is -- do you see</p> <p>23 where I am, on Page 60?</p> <p>24 A. I do. Thank you.</p> | <p style="text-align: right;">Page 165</p> <p>1 calling Approach Number 2 or B, it's the</p> <p>2 second one, in your Section 9, correct?</p> <p>3 A. Yes.</p> <p>4 Q. And then the second sentence</p> <p>5 in Paragraph 136, is that articulating</p> <p>6 the same assumption we discussed just a</p> <p>7 minute ago regarding the flagging of</p> <p>8 every transaction after you have a</p> <p>9 triggering one?</p> <p>10 A. Yes.</p> <p>11 Q. Okay. And just to be clear,</p> <p>12 that assumption has been included in each</p> <p>13 of your five approaches for Section 9,</p> <p>14 correct?</p> <p>15 A. Yes.</p> <p>16 Q. So I want to get an</p> <p>17 understanding for the use of the word</p> <p>18 "average." And I know you probably know</p> <p>19 a lot more about averages than I do at</p> <p>20 least. So we're going to try to keep it</p> <p>21 simple if we can.</p> <p>22 What do you mean, or how did</p> <p>23 you arrive at the average used in this</p> <p>24 approach?</p>  |

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| <p style="text-align: right;">Page 166</p> <p>1 A. So again I think of things<br/> 2 in terms of what you could do in Excel or<br/> 3 I visualize it as an Excel spreadsheet if<br/> 4 I may?<br/> 5 Q. Sure. Yeah, please.<br/> 6 A. So let's suppose that you've<br/> 7 got a spreadsheet that has shipments<br/> 8 measured in dosage units of each drug<br/> 9 code from a distributor to all of the<br/> 10 pharmacies that they ship that drug code<br/> 11 to at any time in the last 12 months.<br/> 12 Q. Over what geography?<br/> 13 A. The country. So I'll make<br/> 14 it a little bit more concrete.<br/> 15 Cardinal Health in January<br/> 16 of 2008, I look at what Cardinal Health<br/> 17 shipped to every pharmacy it ever shipped<br/> 18 to in 2007. And so the -- the columns<br/> 19 would be, in my example, the pharmacies<br/> 20 that it shipped to. And let's say that<br/> 21 there's 3,000 pharmacies across the<br/> 22 country. And down the -- the rows I have<br/> 23 the 12 months in 2007. And what I'm<br/> 24 filling in in that spreadsheet is the</p> | <p style="text-align: right;">Page 168</p> <p>1 spreadsheet, you would sum up all of the<br/> 2 rows and then divide them by the number<br/> 3 of entries that have something that's not<br/> 4 zero or negative?<br/> 5 A. No. You are summing across<br/> 6 all of the observations at one time. So<br/> 7 in my example, let's say there's 100<br/> 8 pharmacies and 12 months. If there was<br/> 9 something shipped to each of the<br/> 10 pharmacies, you'd have 1200 observations.<br/> 11 100 pharmacies, 12 months.<br/> 12 So you'd add up those 1200<br/> 13 numbers and you'd divide by 1200 to get<br/> 14 the average.<br/> 15 Q. Thank you. And so you said<br/> 16 you skipped the zeros and you skipped the<br/> 17 negative.<br/> 18 What do you mean by negative<br/> 19 entries in that setting? What kind of<br/> 20 observations are you talking about?<br/> 21 A. Well, I don't know if there<br/> 22 were any, but it could be that there was<br/> 23 a return that would show up as a negative<br/> 24 dosage unit.</p>  |
| <p style="text-align: right;">Page 167</p> <p>1 number of dosage units that Cardinal<br/> 2 Health shipped to each of those<br/> 3 pharmacies in each of those months in<br/> 4 2007 of a particular drug code.<br/> 5 And then you could, in<br/> 6 Excel, just say, take the average of all<br/> 7 of that, where there's a positive number.<br/> 8 So if there's a zero or a negative, you<br/> 9 ignore it.<br/> 10 Take the average of all of<br/> 11 the dosage units in any month to any of<br/> 12 the pharmacies. And whatever that<br/> 13 average is, is your threshold to multiply<br/> 14 by two or by three to determine whether<br/> 15 the shipments in January of 2008 get<br/> 16 flagged.<br/> 17 Q. So that's for the way you<br/> 18 use the word "average" for your second<br/> 19 and third approaches in Section 9; is<br/> 20 that correct?<br/> 21 A. Correct.<br/> 22 Q. Okay. And so to make sure<br/> 23 I'm understanding, using your<br/> 24 hypothetical example of the Excel</p>  | <p style="text-align: right;">Page 169</p> <p>1 Q. So you did not -- if there<br/> 2 were returns, you didn't back those out<br/> 3 of the totals you were using?<br/> 4 A. In -- in some places that is<br/> 5 done. But I would not be -- I have to<br/> 6 confirm this, but I don't believe that in<br/> 7 my prior example if 1,199 entries were<br/> 8 positive and one of the entries was<br/> 9 negative, I included the negative. But<br/> 10 I'm just not 100 percent sure as I sit<br/> 11 here.<br/> 12 Q. So you think you did take<br/> 13 that into account?<br/> 14 A. Well, as I said, in -- in<br/> 15 some parts of the analysis, yes. It's --<br/> 16 it's very de minimus, but I just -- I'm<br/> 17 not 100 percent certain as I sit here in<br/> 18 the example that I just gave you, if one<br/> 19 of those 1200 observations was a negative<br/> 20 number, how we dealt with it.<br/> 21 Q. So is it fair to say that in<br/> 22 these five approaches in Section 9, you<br/> 23 don't know how returns were handled?<br/> 24 A. My -- my recollection, I'd</p> |



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1 have to confirm it, but my recollection  
2 is that returns would be included in  
3 the -- in the monthly totals that would  
4 be in the 1200 cells in my example. And  
5 the cumulative orders in January of 2008  
6 would also include a return if there was  
7 a return prior to the transaction that  
8 flagged, got flagged and then caused all  
9 subsequent transactions to be flagged.  
10 That's a very de minimus issue, but I  
11 just don't -- to be precise, I'm not --  
12 I'm not 100 percent certain.  
13 Q. So taking a couple steps  
14 back. In the application of these  
15 various approaches, there is computer  
16 code; is that fair to say?  
17 A. Yes.  
18 Q. And we defendants asked for  
19 plaintiffs' counsel to provide us the  
20 computer code, and -- and we got a large  
21 amount of information regarding the codes  
22 that you and your team used. Are you  
23 aware of that?  
24 A. Yes.

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1 Q. Do you write computer code?  
2 A. Not in 35 years.  
3 Q. Okay. Did you write any of  
4 the computer code used in connection with  
5 your opinions in this litigation?  
6 A. I don't believe so.  
7 Q. Did you review any of the  
8 computer code used in this litigation?  
9 A. Yes.  
10 Q. And did you confirm that the  
11 computer code as applied in this  
12 litigation, reflects what you intended it  
13 to reflect based on what you expressed in  
14 your report?  
15 A. Yes.  
16 Q. And do you have an  
17 understanding of how the computer code  
18 calculates the averages used for the  
19 second and third approaches in Section 9?  
20 A. Yes.  
21 Q. Can you please explain that  
22 to me?  
23 A. Well, it's just as I  
24 described it.

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1 Q. So, I am by no means an  
2 expert on computer code. But I -- people  
3 who are better at these things than I am  
4 took a look at it. And what they told me  
5 is there are three different ways that  
6 you calculated an average, and then used  
7 those three to reach the average you used  
8 in your report. Does that sound familiar  
9 to you?  
10 A. I'm sorry, it doesn't.  
11 Q. Okay. And that with doing  
12 that, there were different files that had  
13 source code and then different codes that  
14 used that -- I'm sorry, there were  
15 different datasets and code that used  
16 those datasets. Are you familiar with  
17 that kind of concept?  
18 A. Yeah. That's a different  
19 issue, but yeah, certainly.  
20 Q. Yeah. And in doing those  
21 averages, they did use some of those  
22 datasets and certain code. Does that  
23 make sense to you?  
24 A. Yes.

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1 Q. Okay. In applying the  
2 averages to the different defendants in  
3 this case, is it your intention that each  
4 defendant have their average calculated  
5 in substantially the same way?  
6 A. Yes.  
7 Q. If that were not the case,  
8 would that be a mistake?  
9 A. Not necessarily.  
10 Q. What do you mean by that?  
11 A. Well, I forget which, but  
12 one of the defendants had -- had a little  
13 or no data outside of Ohio, and so the  
14 average would be calculated -- you could  
15 think of it calculated on a state basis  
16 instead of nationally.  
17 There may be other reasons  
18 why. There might be some variation on  
19 the general description that I gave you.  
20 I'd have to look and see what your  
21 consultants think they saw in the code  
22 that they would do differently.  
23 I have -- I've attempted to  
24 describe what the code did and I've

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| <p style="text-align: right;">Page 174</p> <p>1 attempted to implement the code to<br/> 2 reflect what I intended.<br/> 3 It's -- it's possible that<br/> 4 someone would say that -- that an average<br/> 5 should be calculated differently or the<br/> 6 sequencing of steps in the code should be<br/> 7 done differently.<br/> 8 And I just have to evaluate<br/> 9 such an assertion. I -- I do not believe<br/> 10 any such evaluation would result in -- in<br/> 11 any material change in any calculation<br/> 12 that we did.<br/> 13 Q. Was it your intention that<br/> 14 different defendants would be treated<br/> 15 differently for the purposes of averages<br/> 16 depending on if the spelling of that<br/> 17 defendant's name matched in the source<br/> 18 data versus the code in which the data<br/> 19 was used?<br/> 20 A. Well, certainly not. We<br/> 21 tried to correct a lot of misspelling or<br/> 22 variations in spelling in the data. But<br/> 23 it's possible that we didn't catch all of<br/> 24 it.</p> | <p style="text-align: right;">Page 176</p> <p>1 certain defendants who have national data<br/> 2 available had their averages calculated<br/> 3 only for Summit and Cuyahoga Counties?<br/> 4 A. Yes. That would certainly<br/> 5 be true in some situations.<br/> 6 Q. But a couple minutes ago you<br/> 7 told me your intention was to calculate<br/> 8 national averages for the purposes of<br/> 9 your Approaches 2 and 3 in Section 9,<br/> 10 correct?<br/> 11 A. That's correct.<br/> 12 Q. So if what I'm telling you<br/> 13 is that some of the defendants who had<br/> 14 national data available actually had<br/> 15 their averages calculated based just on<br/> 16 Cuyahoga and Summit Counties, would that<br/> 17 be a mistake for those defendants?<br/> 18 A. No, I don't think so. I can<br/> 19 explain if you'd like.<br/> 20 Q. Please do.<br/> 21 A. But maybe I'm not<br/> 22 understanding your --<br/> 23 Q. Well, please explain, and<br/> 24 then we can see if I'm --</p>  |
| <p style="text-align: right;">Page 175</p> <p>1 Q. And it's possible that those<br/> 2 would then be mistakes?<br/> 3 A. I wouldn't think of them as<br/> 4 mistakes, no. It would be issues with<br/> 5 the data that the data we were provided<br/> 6 don't have standardized spelling or same<br/> 7 entity, named differently. And it would<br/> 8 be a mistake in the data, not in our<br/> 9 analysis.<br/> 10 Q. But your team wrote the<br/> 11 code, right?<br/> 12 A. Correct.<br/> 13 Q. So if the code names of the<br/> 14 defendants doesn't match the source<br/> 15 datasets such that the datasets are not<br/> 16 run in the code and you just get a whole<br/> 17 bunch of zeros, that would not be a<br/> 18 mistake in the dataset; that would be a<br/> 19 mistake in the code, correct?<br/> 20 A. I don't know. I'd have to<br/> 21 see the example and look at the data and<br/> 22 see whether -- whether the code should be<br/> 23 modified to pick up more transactions.<br/> 24 Q. Was it your intention that</p> | <p style="text-align: right;">Page 177</p> <p>1 A. Sure.<br/> 2 Q. -- trying to ask something<br/> 3 different.<br/> 4 A. So in Approach 2 and 3<br/> 5 you've got trailing 12-month averages.<br/> 6 And for some of the defendants, we get<br/> 7 individual defendant transaction data<br/> 8 prior to the ARCOS period, prior to 2006.<br/> 9 I'll use Cardinal as an example, because<br/> 10 I think we have data from Cardinal Health<br/> 11 going back to 1997. But we only have<br/> 12 that data for Cuyahoga and Summit, or<br/> 13 maybe for Ohio more broadly. For some of<br/> 14 the defendants we had more or less data<br/> 15 prior to 2006.<br/> 16 So for the -- for whatever<br/> 17 data we have from a defendant prior to<br/> 18 2006 we would calculate the average<br/> 19 across the pharmacies that they gave us<br/> 20 data for, up to January of 2007.<br/> 21 When you get to January of<br/> 22 2007, we then have 12 months of ARCOS<br/> 23 data. And so you would start using ARCOS<br/> 24 data nationally for the calculation. So</p> |

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1 for some of those defendants, we're  
2 using -- you could interpret that as  
3 using state or county averages when  
4 national data is available.  
5 But if you're -- if I'm  
6 articulating the calculation correctly, I  
7 think you would agree that we should be  
8 using the county or state data that the  
9 defendants produced in the pre-ARCOS  
10 period for calculating the averages up  
11 through January of 2007.  
12 So there's a data issue  
13 there. If, in addition to that data  
14 issue I identified for you, there's some  
15 issue with some spelling or some other  
16 issue that you think means that we've  
17 applied a different methodology for  
18 different defendants with the same data  
19 available, I'm happy to look at that.  
20 But there are situations where you would  
21 use more narrow data even when national  
22 data is available. And throughout 2006  
23 would be a good example of that, and  
24 after 2014 as well.

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1 Q. You mentioned a little bit  
2 earlier that your code needs to be run in  
3 a particular sequence. Do you remember  
4 that?  
5 A. No. That's not the way I  
6 said it.  
7 Q. Okay. But to understand  
8 what you did, you ran things in a certain  
9 sequence when you were doing your  
10 analysis, correct?  
11 A. Correct.  
12 Q. And is there a way that we  
13 can tell from your report in what  
14 sequence you took those different steps  
15 to apply your approaches?  
16 A. Yes.  
17 Q. How?  
18 A. Well, it's -- gets pretty  
19 deep in the weeds. But the programming  
20 has, as you were alluding to a few  
21 minutes ago, some intermediate data files  
22 that are created and then used by  
23 subsequent modules of the code, or by  
24 code written in other applications that

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1 read in those intermediate files.  
2 Even within the same file of  
3 code there are sections of that code that  
4 we call -- that we describe as being  
5 commented out, and by commented out, what  
6 I mean is you might write a lengthy piece  
7 of code which is just a text file, it  
8 looks like a text file without the nice  
9 formatting that you would have in words.  
10 So think of it like a Wordpad file.  
11 And when you write 20 or 30  
12 pages of that code, each time you run it,  
13 you don't necessarily want every line of  
14 that code executed. And so you comment  
15 it out, it depends on the language, but  
16 with a percentage sign or with a couple  
17 of backslashes.  
18 And so depending on what you  
19 want to execute of that lengthy code, you  
20 are commenting out stuff or undoing the  
21 commenting. You can get to all of the  
22 tables in my report by using the code  
23 that we provided to you. Sometimes you  
24 might have to comment something out,

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1 or -- or take some of the commenting out.  
2 There might be a couple of  
3 instances where you might have to write  
4 another single line reading in a file  
5 that we forgot to identify. I mean, it's  
6 identified, but there may be -- out of  
7 tens of thousands of lines of code, there  
8 might be a line or two or five that an  
9 experienced programmer would say, yes,  
10 Craig really intended for you to read in  
11 a file that's identified up at the top  
12 again, and it's missing. But with very  
13 little effort, the code that we provided  
14 to you recreates all of this analysis.  
15 Q. Did you provide the  
16 intermediate data files that you made  
17 reference to?  
18 A. I believe all of the ones  
19 that are saved, so along the way when you  
20 write code, there are intermediate files,  
21 temp files, if you will, that are created  
22 by the code and then discarded. And so  
23 they're not saved anywhere. But I think  
24 any -- any file that's saved was provided

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| <p style="text-align: right;">Page 182</p> <p>1 to you. Again, that would be my<br/>2 intention.</p> <p>3 Q. So how could we recreate<br/>4 your process without what you're calling<br/>5 those temp files?</p> <p>6 A. Because they're described in<br/>7 the code.</p> <p>8 Q. And your position is that<br/>9 you've provided sufficient information<br/>10 for us to know the sequencing of the code<br/>11 that you ran?</p> <p>12 A. Yes.</p> <p>13 Q. And you don't have any other<br/>14 documentation on the sequencing of the<br/>15 code that you ran that we haven't been<br/>16 provided with?</p> <p>17 A. That's correct.</p> <p>18 Q. If you were to start from<br/>19 scratch and apply your own code afresh,<br/>20 would you be able to do it in precisely<br/>21 the same sequence that you did it the<br/>22 first time based on what you provided to<br/>23 us?</p> <p>24 A. I believe so. That was my</p>   | <p style="text-align: right;">Page 184</p> <p>1 30 pages.</p> <p>2 And someone who's an expert<br/>3 programmer will look at that and say,<br/>4 okay, here are blocks of the text that<br/>5 were executed the last time this code was<br/>6 executed. But if I want to -- if I want<br/>7 to execute some other text, I need to<br/>8 uncomment some lines, or if as doing --<br/>9 in doing that I want to comment out some<br/>10 other lines, or as I said, there might be<br/>11 a data file that's referenced in<br/>12 subsequent code, but the code above it<br/>13 doesn't read in the data file and a<br/>14 programmer would say, somehow Craig<br/>15 inadvertently deleted or forgot to<br/>16 include a single line here that says read<br/>17 in a file that is mentioned in the next<br/>18 paragraph of the code.</p> <p>19 So I do believe that I<br/>20 provided you all of the code that will do<br/>21 everything that you've asked for.</p> <p>22 Q. All right. Let's take a<br/>23 look at Paragraph 140 on Page 64. And<br/>24 this is the three times trailing 12-month</p> |
| <p style="text-align: right;">Page 183</p> <p>1 intention.</p> <p>2 Q. Is it your intention that<br/>3 our experts would be able to apply the<br/>4 code that you provided to us in exactly<br/>5 the same sequence based on what you've<br/>6 provided to us?</p> <p>7 A. If they're experienced<br/>8 programmers, yes. As I said, there might<br/>9 be a couple of instances where, when you<br/>10 run the code -- I know you don't want me<br/>11 to take much time. But maybe if I could<br/>12 take 30 seconds, I could explain it.</p> <p>13 Q. Please.</p> <p>14 A. So again, think of the code<br/>15 as 30 pages of text file. And as we're<br/>16 running the code to create a table or a<br/>17 figure or do some analysis or create an<br/>18 intermediate file, you're choosing which<br/>19 part of that 30 pages to run and which<br/>20 part not to run.</p> <p>21 And so you can't run<br/>22 necessarily all 30 pages. You are<br/>23 executing some part of the code. And<br/>24 what we provided to you was all of that</p> | <p style="text-align: right;">Page 185</p> <p>1 average pharmacy dosage units.</p> <p>2 Do you see that?</p> <p>3 A. Yes.</p> <p>4 Q. And Paragraph 140 says, "I<br/>5 identified transactions that caused the<br/>6 number of dosage units shipped by a<br/>7 distributor to a pharmacy in a calendar<br/>8 month to exceed three times the trailing<br/>9 12-month average dosage units to retail<br/>10 and chain pharmacies served by the<br/>11 distributor. I have been asked by<br/>12 counsel to assume that the distributor<br/>13 did not effectively investigate the<br/>14 flagged transactions so every subsequent<br/>15 transaction of that drug code is also<br/>16 flagged because the distributor had an<br/>17 unfulfilled obligation to detect and<br/>18 investigate the first flagged<br/>19 transaction."</p> <p>20 Do you see that?</p> <p>21 A. Yes.</p> <p>22 Q. And is that substantially<br/>23 the same as what we discussed about your<br/>24 second approach, the two times trailing</p>   |

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| <p style="text-align: right;">Page 186</p> <p>1 12-month average with respect to your<br/>2 assumption on the subsequent transactions<br/>3 being flagged?<br/>4 A. Yes.<br/>5 Q. And so it's fair to say that<br/>6 the language following "because at the<br/>7 end, the distributor had an unfulfilled<br/>8 obligation to detect and investigate the<br/>9 first flagged transaction," those are not<br/>10 your words, that's not your concept?<br/>11 A. Correct. That sentence<br/>12 could be collapsed to about eight words.<br/>13 Q. Okay. Talking about first<br/>14 this specific approach, the three times<br/>15 trailing 12-month average. There is no<br/>16 citation for where it comes from; is that<br/>17 right?<br/>18 A. Except in the first<br/>19 paragraph that introduces Section 9 where<br/>20 I say that I was asked to implement these<br/>21 algorithms by plaintiffs' counsel. So<br/>22 the cite would be plaintiffs' counsel.<br/>23 Q. Okay. So the cite would be<br/>24 plaintiffs' counsel. It's not some other</p> | <p style="text-align: right;">Page 188</p> <p>1 transaction."<br/>2 Did I read that correctly?<br/>3 A. Yes.<br/>4 Q. Just like we talked about<br/>5 with your third approach, I don't see a<br/>6 cite for the source of this fourth<br/>7 approach. Is it also plaintiffs'<br/>8 counsel?<br/>9 A. Yes.<br/>10 Q. And is it also the same as<br/>11 to the assumption that the concept<br/>12 towards the end following the "because<br/>13 the distributor had an unfulfilled<br/>14 obligation to detect and investigate the<br/>15 first flagged transaction," that's not<br/>16 your words, that's counsel's words?<br/>17 A. Correct.<br/>18 I'm sorry, I would say it a<br/>19 little bit differently.<br/>20 As I said a couple of times<br/>21 now when we talked about that sentence<br/>22 which we see five times in the report, it<br/>23 could be condensed to just say I've been<br/>24 asked by counsel to flag all subsequent</p> |
| <p style="text-align: right;">Page 187</p> <p>1 industry document or guidance like we<br/>2 talked about earlier with respect to any<br/>3 of the approaches, correct?<br/>4 A. Correct.<br/>5 Q. Your fourth approach starts<br/>6 at Paragraph 144. Do you see that on<br/>7 Page 68?<br/>8 A. Yes.<br/>9 Q. It says maximum 8,000 dosage<br/>10 units monthly; is that correct?<br/>11 A. Yes.<br/>12 Q. And it says, on<br/>13 Paragraph 144, "I identify transactions<br/>14 that cause the number of dosage units<br/>15 shipped by a distributor to a pharmacy in<br/>16 a calendar month to exceed 8,000 dosage<br/>17 units. I have been asked by counsel to<br/>18 assume that the distributor did not<br/>19 effectively investigate the flagged<br/>20 transactions and so every subsequent<br/>21 transaction of that drug code is also<br/>22 flagged because the distributor had an<br/>23 unfulfilled obligation to detect and<br/>24 investigate the first flagged</p>   | <p style="text-align: right;">Page 189</p> <p>1 transactions after a transaction has been<br/>2 flagged. And it could be full stop with<br/>3 that.<br/>4 Q. Okay.<br/>5 A. It doesn't require the rest<br/>6 of what's in that sentence.<br/>7 Q. And the rest of that<br/>8 sentence is not your opinion?<br/>9 A. Correct.<br/>10 Q. And you don't have a basis<br/>11 other than counsel for including that in<br/>12 your report?<br/>13 A. It's not an opinion I have.<br/>14 Q. Okay. Taking a quick look<br/>15 at Page 72, Paragraph 148. You'll see<br/>16 maximum daily dosage units.<br/>17 Do you see that?<br/>18 A. Yes.<br/>19 Q. And this is your fifth<br/>20 approach, right?<br/>21 A. Correct.<br/>22 Q. And Paragraph 148 says, "I<br/>23 identified transactions that caused the<br/>24 number of dosage units shipped by a</p>   |



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| <p style="text-align: right;">Page 190</p> <p>1 distributor to a pharmacy in a day to<br/>2 exceed a number of dosage units that<br/>3 varies by drug type and within some drug<br/>4 types by formulation."<br/>5       Then you have a citation.<br/>6 We'll get back to that in a second.<br/>7       And then it says, "I have<br/>8 been asked by counsel to assume that the<br/>9 distributor did not effectively<br/>10 investigate the flagged transactions and<br/>11 so every subsequent transaction of that<br/>12 drug code is also flagged because the<br/>13 distributor had an unfulfilled obligation<br/>14 to detect and investigate the first<br/>15 flagged transaction."<br/>16       Did I read that accurately?<br/>17       A. Yes.<br/>18       Q. And this is describing the<br/>19 fifth approach that we talked about a<br/>20 little bit earlier?<br/>21       A. Yes.<br/>22       Q. And in that last clause<br/>23 following the "because," this is the same<br/>24 language we were just discussing, that</p>  | <p style="text-align: right;">Page 192</p> <p>1 implement an approach that uses the daily<br/>2 thresholds in that document.<br/>3       Q. Are you taking any position<br/>4 or making any opinion on the<br/>5 appropriateness or that lack thereof, of<br/>6 applying those thresholds from that<br/>7 document cited in Footnote 55?<br/>8       A. No.<br/>9       Q. Substantively, do you have<br/>10 an understanding of what that document<br/>11 is?<br/>12       A. I have a general<br/>13 understanding, not an expert opinion.<br/>14 But a general understanding of the<br/>15 document.<br/>16       Q. And how did you come to a<br/>17 general understanding of that document?<br/>18       A. Well, I reviewed it. It's a<br/>19 two-page document. I think it's a<br/>20 Cardinal Health document. And it gives,<br/>21 on those two pages -- I've heard it<br/>22 referred to as the cage vault rule. I'm<br/>23 not sure exactly the significance of that<br/>24 term.</p>        |
| <p style="text-align: right;">Page 191</p> <p>1 the distributor had an unfulfilled<br/>2 obligation to detect and investigate the<br/>3 first flagged transaction, like we talked<br/>4 about, is not an opinion of yours, that<br/>5 was provided to you by plaintiffs'<br/>6 counsel, correct?<br/>7       A. Yes.<br/>8       Q. Why did you cite to the<br/>9 document you have in Paragraph Number 55?<br/>10       A. Well, because there's a<br/>11 daily threshold that varies across the<br/>12 drugs and it's a little bit more<br/>13 complicated than the first four methods,<br/>14 how you identify a flag. And so rather<br/>15 than itemize in the footnote what each of<br/>16 the daily thresholds are by drug, we cite<br/>17 to the document where we used values for<br/>18 the daily thresholds, where we find --<br/>19 I'm sorry, where we find values for the<br/>20 daily thresholds.<br/>21       Q. How did you come to cite<br/>22 that document in Footnote 55?<br/>23       A. The document was provided to<br/>24 us by counsel and we were asked to</p> | <p style="text-align: right;">Page 193</p> <p>1       But my understanding is<br/>2 that -- that it -- it limited shipments<br/>3 or flagged shipments of the various drugs<br/>4 that are listed there to a certain amount<br/>5 per day.<br/>6       The significance is not --<br/>7 is -- for me is just a list of drugs and<br/>8 a list of numbers, daily limits. I -- I<br/>9 don't -- I didn't investigate the origin<br/>10 of that document or how it might have<br/>11 been used in realtime.<br/>12       Q. Sure. And was that document<br/>13 provided to you?<br/>14       You mentioned it was a<br/>15 two-page document?<br/>16       A. That's my recollection.<br/>17       Q. Was it provided to you as<br/>18 part of a thicker document or just as a<br/>19 two-page document?<br/>20       A. I don't know.<br/>21       Q. And you said sometimes it's<br/>22 referred -- referred to as the cage vault<br/>23 rule. By whom?<br/>24       A. I've heard my staff refer to</p> |

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| <p style="text-align: right;">Page 194</p> <p>1 it as cage vault. I don't know what the</p> <p>2 origin of that term is.</p> <p>3 Q. Okay.</p> <p>4 A. When you are at a good</p> <p>5 stopping point for a comfort break --</p> <p>6 Q. Let's take a break right</p> <p>7 now. Perfect. Let's do it.</p> <p>8 THE VIDEOGRAPHER: Off the</p> <p>9 record at 2:14 p.m.</p> <p>10 (Short break.)</p> <p>11 THE VIDEOGRAPHER: We are</p> <p>12 back on the record at 2:43 p.m.</p> <p>13 BY MS. McENROE:</p> <p>14 Q. Dr. McCann, could you please</p> <p>15 turn to Page 76 of your report. There's</p> <p>16 a section headed "Additional</p> <p>17 Information."</p> <p>18 Do you see that?</p> <p>19 A. No. I'm sorry. "Additional</p> <p>20 Identification."</p> <p>21 Q. Additional -- did I -- yes,</p> <p>22 sorry, I'll start over.</p> <p>23 So we're on Page 76, right</p> <p>24 above Paragraph 152 is a header that says</p>  | <p style="text-align: right;">Page 196</p> <p>1 Q. "Additional charts and</p> <p>2 tables reflecting the result of applying</p> <p>3 methodologies below to each chain</p> <p>4 distributor are in Appendix 11."</p> <p>5 With my couple hiccups, did</p> <p>6 I read that correctly?</p> <p>7 A. Yes.</p> <p>8 Q. Okay. And so if I'm</p> <p>9 understanding correctly, you took the</p> <p>10 five approaches from earlier in Section 9</p> <p>11 of your report and rerun -- reran them</p> <p>12 here, but looking at the chain</p> <p>13 distributors from the perspective of what</p> <p>14 they were receiving as customers? Is</p> <p>15 that a fair way to characterize it?</p> <p>16 A. Yes. I didn't think of it</p> <p>17 that way, but that's -- that's right I</p> <p>18 think.</p> <p>19 Q. And the assumptions and</p> <p>20 understandings that we discussed earlier</p> <p>21 today with respect to the five</p> <p>22 methodologies or approaches, those</p> <p>23 assumptions would continue to hold true</p> <p>24 as applied here in the additional</p> |
| <p style="text-align: right;">Page 195</p> <p>1 "Additional Identification," correct?</p> <p>2 A. Yes.</p> <p>3 Q. It says, "I have been asked</p> <p>4 by counsel to assume that chain</p> <p>5 distributors may have had knowledge of --</p> <p>6 or information available to inform them</p> <p>7 of -- opioid shipments from all</p> <p>8 distributors to the chain distributors'</p> <p>9 affiliated pharmacies."</p> <p>10 Do you see that?</p> <p>11 A. Yes.</p> <p>12 Q. Did I read that correctly?</p> <p>13 A. Yes.</p> <p>14 Q. And it goes on to say, "I</p> <p>15 have rerun the five identification</p> <p>16 routines described above assuming that</p> <p>17 the chain distributors could have flagged</p> <p>18 transactions based on this expanded</p> <p>19 information set and the report" -- "and</p> <p>20 report the results for the chain</p> <p>21 distributors in Tables 34 through Table</p> <p>22 43 below."</p> <p>23 (Telephonic interruption.)</p> <p>24 BY MS. McENROE:</p> | <p style="text-align: right;">Page 197</p> <p>1 identification section, correct?</p> <p>2 A. Correct.</p> <p>3 Q. Do you have any</p> <p>4 understanding of the legal claims brought</p> <p>5 against what you're referring to as the</p> <p>6 chain distributors?</p> <p>7 A. No.</p> <p>8 Q. Have you read the complaint</p> <p>9 in this case?</p> <p>10 A. I did.</p> <p>11 Q. Do you have -- do you know</p> <p>12 that the chain distributors are not being</p> <p>13 sued in their dispensing capacity, so for</p> <p>14 the pharmaceuticals that they were buying</p> <p>15 and dispensing out to patients? Do you</p> <p>16 have an understanding one way or the</p> <p>17 other?</p> <p>18 A. That's my general</p> <p>19 understanding, that there -- yes, what</p> <p>20 you just said is consistent with my</p> <p>21 general understanding.</p> <p>22 Q. So you think the chain</p> <p>23 distributors are being sued because</p> <p>24 they're pharmacies and how they dispense</p>  |

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| <p style="text-align: right;">Page 198</p> <p>1 the drugs?</p> <p>2 A. No. It's the opposite.</p> <p>3 What I'm saying is I agree -- my general</p> <p>4 understanding, as you said a minute ago,</p> <p>5 that they are being sued as distributors,</p> <p>6 not as pharmacies.</p> <p>7 Q. Okay. And looking, for</p> <p>8 example, at Table 34 on the top of Page</p> <p>9 77, just using Rite Aid as an example,</p> <p>10 you have numbers populated in each of</p> <p>11 those columns, correct?</p> <p>12 A. Correct.</p> <p>13 Q. So for oxycodone,</p> <p>14 hydrocodone, morphine, hydromorphone,</p> <p>15 oxymorphone, and other; is that correct?</p> <p>16 A. Correct.</p> <p>17 Q. And that would represent the</p> <p>18 drugs that were flowing to Rite Aid</p> <p>19 pharmacies for each of those different</p> <p>20 types of drugs, correct?</p> <p>21 A. Correct.</p> <p>22 Q. Some of which may have been</p> <p>23 distributed by Rite Aid to itself and</p> <p>24 some of which may not, correct?</p> | <p style="text-align: right;">Page 200</p> <p>1 Q. And looking back at</p> <p>2 Paragraph 152, there's a sentence towards</p> <p>3 the middle that starts, "I have rerun."</p> <p>4 Do you see that sentence?</p> <p>5 A. Yes.</p> <p>6 Q. "I have rerun the five</p> <p>7 identification routines described above</p> <p>8 assuming that the chain distributors</p> <p>9 could have flagged transactions based on</p> <p>10 this expanded information set and report</p> <p>11 the results for this chain," and it keeps</p> <p>12 going on.</p> <p>13 Do you see that?</p> <p>14 A. Yes.</p> <p>15 Q. Where did you get that</p> <p>16 assignment from?</p> <p>17 A. Plaintiffs' counsel.</p> <p>18 Q. So plaintiffs' counsel asked</p> <p>19 you to do that?</p> <p>20 A. Yes.</p> <p>21 Q. Are you saying that chain</p> <p>22 distributors should have flagged these</p> <p>23 transactions, or you're just saying that</p> <p>24 it's possible that they could have?</p>  |
| <p style="text-align: right;">Page 199</p> <p>1 A. Correct.</p> <p>2 Q. That would be true of each</p> <p>3 of the rows, if you will, thinking of</p> <p>4 this as an Excel, listed there, right,</p> <p>5 CVS, Discount Drug Mart --</p> <p>6 (Telephonic interruption.)</p> <p>7 BY MS. McENROE:</p> <p>8 Q. -- HBC, Giant Eagle, Rite</p> <p>9 Aid, Walgreens, and Walmart?</p> <p>10 A. Yes.</p> <p>11 Q. And that other column, what</p> <p>12 is reflected there?</p> <p>13 A. Well, the analysis is done</p> <p>14 on 12 drugs. And there's five listed</p> <p>15 there. So it would be the additional</p> <p>16 seven.</p> <p>17 Q. Did you do any work to</p> <p>18 identify or examine whether the</p> <p>19 medication reflected here was dispensed</p> <p>20 to patients pursuant to lawfully written</p> <p>21 prescriptions?</p> <p>22 A. No.</p> <p>23 Q. Not one way or the other?</p> <p>24 A. Correct.</p>  | <p style="text-align: right;">Page 201</p> <p>1 A. I'm definitely not saying</p> <p>2 should. What I'm saying is if you make</p> <p>3 the assumption in the previous sentence</p> <p>4 that the chain distributors could see all</p> <p>5 of the distributors' shipments to each of</p> <p>6 the chain distributors' pharmacies, then</p> <p>7 you can apply the five algorithms from</p> <p>8 the previous sections to that set of</p> <p>9 transactions that include not just the</p> <p>10 chain distributors' transactions to the</p> <p>11 pharmacies.</p> <p>12 And if you did, you would</p> <p>13 flag a different set of transactions.</p> <p>14 You'd flag additional transactions.</p> <p>15 Q. So you're not suggesting</p> <p>16 that there are any particular patients</p> <p>17 for whom these chain pharmacies should</p> <p>18 have refused to fill prescriptions,</p> <p>19 correct?</p> <p>20 A. Correct.</p> <p>21 Q. And you're not suggesting in</p> <p>22 your report that at a certain point in</p> <p>23 time or because of a certain triggering</p> <p>24 transaction, any specific pharmacy should</p> |

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| <p style="text-align: right;">Page 202</p> <p>1 have stopped dispensing a drug<br/>         2 altogether, correct?<br/>         3 A. Correct. I think that's for<br/>         4 other witnesses.<br/>         5 Q. Do you have in mind in<br/>         6 particular who you're thinking would make<br/>         7 that opinion?<br/>         8 A. No. I just mean I'm -- I'm<br/>         9 focused on the data and applying certain<br/>         10 methodologies and certain assumptions.<br/>         11 And other witnesses will -- will either<br/>         12 support or lead to a modification of<br/>         13 those assumptions. The methodologies<br/>         14 that I've laid out here are flexible<br/>         15 enough to incorporate different sets of<br/>         16 facts as they're developed for the court,<br/>         17 for the judge or for the jury.<br/>         18 Q. Well, you have five<br/>         19 approaches here. And those are the five<br/>         20 you apply, correct?<br/>         21 A. Correct.<br/>         22 Q. So if you were to apply a<br/>         23 different approach, that would require a<br/>         24 whole different set of analysis of this</p> | <p style="text-align: right;">Page 204</p> <p>1 Do you see that?<br/>         2 A. Yes.<br/>         3 Q. "In Section 10, I provide<br/>         4 certain estimates regarding the total<br/>         5 aggregate shipments of opioids into Ohio<br/>         6 from 1997 to 2018."<br/>         7 Do you see that?<br/>         8 A. Yes.<br/>         9 Q. Okay. So let's head to -- I<br/>         10 think it's -- Paragraph 153 on Page 82.<br/>         11 Do you see that?<br/>         12 A. Yes.<br/>         13 Q. And above that is a heading<br/>         14 called "Excessive Shipments."<br/>         15 Do you see that?<br/>         16 A. Yes.<br/>         17 Q. Now, when you discussed this<br/>         18 Section 10 at the front of your report,<br/>         19 you did not use the word "excessive" in<br/>         20 your summary of opinions in what we just<br/>         21 looked at, correct?<br/>         22 A. Correct.<br/>         23 Q. Is that word here,<br/>         24 "excessive," your word?</p>  |
| <p style="text-align: right;">Page 203</p> <p>1 same data, correct?<br/>         2 A. Not a whole different set.<br/>         3 There would be a tremendous amount of<br/>         4 overlap. I can give you an example. But<br/>         5 no, it would not be a whole different<br/>         6 set. It might be just a very slight<br/>         7 modification to an assumption or two. It<br/>         8 might -- of the thousands and thousands<br/>         9 of lines of code, it might -- it might<br/>         10 involve changing one or two lines of<br/>         11 code. It's not a whole new analysis.<br/>         12 Q. But presumably it would<br/>         13 change the output, so the tables, the<br/>         14 figures, the actual numbers in them would<br/>         15 need to change?<br/>         16 A. If you applied a different<br/>         17 methodology, sure.<br/>         18 Q. Let's take a look all the<br/>         19 way back to Page 6 of your report,<br/>         20 Paragraph 21.<br/>         21 A. Yes.<br/>         22 Q. And let's see. You have a<br/>         23 line that starts three lines down. It<br/>         24 starts, "In Section 10."</p>                | <p style="text-align: right;">Page 205</p> <p>1 A. Yes.<br/>         2 Q. Why did you use the word<br/>         3 "excessive" here?<br/>         4 A. Well, you have to read the<br/>         5 title in the context of the four or five<br/>         6 or eight pages that follow. And you can<br/>         7 see in what follows. I report the<br/>         8 shipments per capita, and then a couple<br/>         9 of baselines that the judge or a jury may<br/>         10 find helpful. And excessive is then<br/>         11 defined to just be the difference between<br/>         12 what you observe and those example<br/>         13 thresholds. The modeling allows for<br/>         14 variations in those thresholds, the two<br/>         15 thresholds are just examples that I've<br/>         16 given you. And then I've described the<br/>         17 difference between what was shipped per<br/>         18 capita and those baselines as excessive.<br/>         19 I -- I'm not -- I'm not<br/>         20 describing them as excessive in some<br/>         21 epidemiological sense, or -- or legal<br/>         22 sense. I'm just describing it relative<br/>         23 to the benchmarks that I've -- or<br/>         24 baselines that I've described.</p> |

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| <p style="text-align: right;">Page 206</p> <p>1 Q. Okay. I mean I want to make<br/>         2 sure I understand the use of the word<br/>         3 excessive here. Do you literally mean<br/>         4 that it -- the data exceeds something, so<br/>         5 you're using the word excessive? Is that<br/>         6 what you're referring to?<br/>         7 A. Exactly.<br/>         8 Q. So you're not saying that<br/>         9 you think it's too much in that means of<br/>         10 excessive. You're trying to just say<br/>         11 it's above some threshold you've<br/>         12 identified?<br/>         13 A. Correct.<br/>         14 Q. Okay. So you're not making<br/>         15 a qualitative judgment about the<br/>         16 excessiveness in this section, you are<br/>         17 making a quantitative judgment?<br/>         18 A. I think that's correct.<br/>         19 Q. You are not saying in your<br/>         20 report that excessive means suspicious<br/>         21 for the purposes of suspicious order<br/>         22 monitoring, correct?<br/>         23 A. Correct.<br/>         24 Q. You are not saying that</p> | <p style="text-align: right;">Page 208</p> <p>1 supports my identification of<br/>         2 transactions."<br/>         3 Did I read that correctly?<br/>         4 A. Yes.<br/>         5 Q. Now, I want to make sure I<br/>         6 understand what you're saying here.<br/>         7 When you are talking about<br/>         8 the purpose of identifying transactions,<br/>         9 is that the same as flagging transactions<br/>         10 like we've discussed today?<br/>         11 A. Yes.<br/>         12 Q. And you are now saying that<br/>         13 means to determine which transactions<br/>         14 warrant some further due diligence.<br/>         15 Do you see that?<br/>         16 A. Yes.<br/>         17 Q. And is that coming from you<br/>         18 or is that coming from plaintiffs'<br/>         19 counsel, that the flagging means that<br/>         20 those transactions warrant some further<br/>         21 due diligence?<br/>         22 A. I'm not sure. Maybe a<br/>         23 mixture of both. But I'm -- I'm just<br/>         24 trying to provide some context. My</p>   |
| <p style="text-align: right;">Page 207</p> <p>1 excessive means unlawful in any way,<br/>         2 correct?<br/>         3 A. Correct.<br/>         4 Q. Let's take a look at<br/>         5 Paragraph 160 which is later on in this<br/>         6 section, right at the end of it, on<br/>         7 Page 88.<br/>         8 Do you see that?<br/>         9 A. Yes.<br/>         10 Q. And toward -- I would say a<br/>         11 little more than halfway down there's a<br/>         12 sentence that starts "the purpose."<br/>         13 Do you see that?<br/>         14 A. Yes.<br/>         15 Q. "The purpose of identifying<br/>         16 transactions -- to determine which<br/>         17 transactions warrant some further due<br/>         18 diligence -- is likely to only be met by<br/>         19 flagging more transactions than those<br/>         20 which are used to fill medically<br/>         21 unnecessary prescriptions. Thus the<br/>         22 decline in opioid use in Ohio and the<br/>         23 implication that more than 70 percent of<br/>         24 opioids shipped into Ohio were excessive</p>                        | <p style="text-align: right;">Page 209</p> <p>1 understanding of the context. I'm not<br/>         2 suggesting that I'm a subject matter<br/>         3 expert on that issue. But I -- I'm --<br/>         4 I'm generally aware that -- that these<br/>         5 are opioids as opposed to children's toys<br/>         6 or bitcoin. And I have a general<br/>         7 understanding of the purpose of the<br/>         8 analysis. And that's all I'm trying to<br/>         9 convey there, is my general understanding<br/>         10 of the context and how Sections 9 and 10<br/>         11 relate to one another. I'm not in those<br/>         12 couple of sentences expressing an opinion<br/>         13 about what -- what is suspicious and what<br/>         14 due diligence ought to follow in a<br/>         15 suspicious that's raised.<br/>         16 Q. I may not go so far as<br/>         17 children's toys. But let's see, did you<br/>         18 compare your analysis of opioids to an<br/>         19 analysis of other medications over those<br/>         20 periods of time?<br/>         21 A. No.<br/>         22 Q. You used the phrase, in the<br/>         23 language that I had just read out, of<br/>         24 medically unnecessary prescriptions?</p> |



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| <p style="text-align: right;">Page 210</p> <p>1 A. Yes.</p> <p>2 Q. You don't define that in</p> <p>3 your report, correct?</p> <p>4 A. Correct.</p> <p>5 Q. And you are not a medical</p> <p>6 doctor?</p> <p>7 A. Correct.</p> <p>8 Q. And do you have any basis</p> <p>9 for saying what is or is not medically</p> <p>10 unnecessary of a prescription?</p> <p>11 A. No. And I didn't mean to</p> <p>12 imply that I did.</p> <p>13 Q. Let's take a look at</p> <p>14 Paragraph 154. So we're going to go back</p> <p>15 a little bit in the same section.</p> <p>16 A. Yes.</p> <p>17 Q. And it says -- you see it,</p> <p>18 it's on Page 83?</p> <p>19 A. Yes.</p> <p>20 Q. "Figure 21, Figure 22, and</p> <p>21 Figure 23 illustrate a similar pattern.</p> <p>22 In Ohio and in Cuyahoga County and Summit</p> <p>23 County, per capita opioid MME increased</p> <p>24 from 1997 to 2010 and thereafter</p> | <p style="text-align: right;">Page 212</p> <p>1 data or data that could be developed on</p> <p>2 that point, I would have expertise in</p> <p>3 analyzing that data. Maybe not</p> <p>4 interpreting the data fully, but</p> <p>5 certainly, so some aspect of what you</p> <p>6 just described.</p> <p>7 Q. Sure.</p> <p>8 A. But -- but not on the</p> <p>9 interpretation of such data.</p> <p>10 Q. So how did you arrive at</p> <p>11 1997 as opposed to 1996 or 1998?</p> <p>12 A. My recollection is that the</p> <p>13 retail drug summary reports go back to</p> <p>14 1997. So it's the beginning of the data</p> <p>15 that's publicly available.</p> <p>16 Q. So there was no medical</p> <p>17 reason or reason from the medical</p> <p>18 community about why 1997 was serving as</p> <p>19 your baseline for a number of your</p> <p>20 analyses in your report?</p> <p>21 A. Correct. That's just the</p> <p>22 beginning of the ARCOS retail drug</p> <p>23 summary report data.</p> <p>24 Q. In your analysis of the</p>  |
| <p style="text-align: right;">Page 211</p> <p>1 declined, so that per capita opioid MME</p> <p>2 in 2017 was 3.7 times per capita opioid</p> <p>3 MME in 1997 in Ohio."</p> <p>4 Do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. Do you know what MME means?</p> <p>7 A. Yes.</p> <p>8 Q. What does it mean?</p> <p>9 A. Morphine milligram</p> <p>10 equivalent.</p> <p>11 Q. Do you have any basis to</p> <p>12 know what if any proportion of the</p> <p>13 population in Ohio had untreated pain in</p> <p>14 1997?</p> <p>15 A. No.</p> <p>16 Q. Have you done any research</p> <p>17 on that point?</p> <p>18 A. No.</p> <p>19 Q. Do you have any expertise on</p> <p>20 that point?</p> <p>21 A. Not on the epidemiological</p> <p>22 or pharmacological or medical aspects of</p> <p>23 that point. But to the extent that</p> <p>24 the -- that there is publicly available</p>                               | <p style="text-align: right;">Page 213</p> <p>1 data, did you do any comparison between</p> <p>2 what was shipped into either the state of</p> <p>3 Ohio or these specific counties in Ohio</p> <p>4 versus what was being dispensed to</p> <p>5 patients pursuant to lawfully written</p> <p>6 prescriptions in those geographies?</p> <p>7 A. No.</p> <p>8 Q. So in some instances in this</p> <p>9 section you used 19 -- I'm sorry. Strike</p> <p>10 that.</p> <p>11 In some instances in this</p> <p>12 section you used 1997 as the baseline.</p> <p>13 And then you also used what you called</p> <p>14 the 1997 to 2018 interpolated baseline,</p> <p>15 correct?</p> <p>16 A. Yes.</p> <p>17 Q. And let's look at</p> <p>18 Paragraph 155 on Page 84. And it says,</p> <p>19 "A possible upper bound on the medically</p> <p>20 necessary opioid MME per capita baseline</p> <p>21 is the per capita MME interpolated from</p> <p>22 1997 to 2018. This baseline assumes that</p> <p>23 all prescriptions of opioids in 1997 and</p> <p>24 in 2018 were medically necessary and that</p> |

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| <p style="text-align: right;">Page 214</p> <p>1 the drivers of legitimate opioid use,<br/>                 2 e.g., aging of the population evolved<br/>                 3 gradually rather than discontinuously<br/>                 4 over time.<br/>                 5 Plaintiffs allege that<br/>                 6 opioid consumption in 2018 remained<br/>                 7 excessive and was still influenced by the<br/>                 8 defendants' alleged fraudulent conduct.<br/>                 9 Did I read that correctly?<br/>                 10 A. Yes.<br/>                 11 Q. Did you decide that the<br/>                 12 interpolation from 1997 to 2018 was a<br/>                 13 possible upper bound?<br/>                 14 A. Yes.<br/>                 15 Q. On what basis?<br/>                 16 A. Well, I observed MME per<br/>                 17 capita consumption in 1997. I observed<br/>                 18 it in 19 -- in 2018. And I observed the<br/>                 19 dramatic increase, and then decline<br/>                 20 between those two dates.<br/>                 21 And in addition to just<br/>                 22 observing that dramatic increase, I<br/>                 23 thought the court might be interested in<br/>                 24 seeing how much of that increase was in</p>  | <p style="text-align: right;">Page 216</p> <p>1 what you call an upper bound, correct?<br/>                 2 A. A possible upper bound.<br/>                 3 Q. Possible upper bound. So<br/>                 4 are you of the opinion that any<br/>                 5 distribution of opioids above that<br/>                 6 possible upper bound was not medically<br/>                 7 necessary?<br/>                 8 A. No. That's not what it<br/>                 9 says.<br/>                 10 Q. Well, I'm asking you. Is<br/>                 11 that your intention through what you're<br/>                 12 doing here?<br/>                 13 A. No.<br/>                 14 Q. So of what consequences the<br/>                 15 analysis that you're doing in this<br/>                 16 section?<br/>                 17 A. Well, I think of it in two<br/>                 18 parts. I think that the first part of<br/>                 19 Section 10 illustrates for the court, for<br/>                 20 the jury, this enormous hump in opioid<br/>                 21 per capita consumption in Ohio, in<br/>                 22 Cuyahoga and Summit. And if Section 10<br/>                 23 ended there, that might be of service.<br/>                 24 Then, in addition, I'm</p>   |
| <p style="text-align: right;">Page 215</p> <p>1 excess of -- of these two example base<br/>                 2 lines, that could be varied with<br/>                 3 different assumptions.<br/>                 4 I might have thought of a<br/>                 5 third baseline or a fourth baseline. But<br/>                 6 these are the two that I thought of. And<br/>                 7 so I offer them as possible upper and<br/>                 8 lower bounds. Someone could suggest<br/>                 9 something different. But this is what --<br/>                 10 what I thought and the rationale for it.<br/>                 11 I think you've already read<br/>                 12 into the record.<br/>                 13 Q. And this came from you, not<br/>                 14 from plaintiffs' counsel?<br/>                 15 A. Yes.<br/>                 16 Q. So in this paragraph, and in<br/>                 17 this section, you're talking about what<br/>                 18 you deem to be medically necessary at<br/>                 19 certain points in time, correct?<br/>                 20 A. No. That's not what that<br/>                 21 paragraph says.<br/>                 22 Q. So if I were to take the<br/>                 23 interpolated line between 1997 and 2018,<br/>                 24 I recognize that you're treating that as</p> | <p style="text-align: right;">Page 217</p> <p>1 saying is there something more that the<br/>                 2 data from the retail drug summary reports<br/>                 3 can tell us? And in particular, how much<br/>                 4 of that tremendous hump in the<br/>                 5 consumption could be thought of as in<br/>                 6 excess of a reasonable baseline.<br/>                 7 And I -- I offered two<br/>                 8 alternatives. Someone could say that the<br/>                 9 2018 levels are still excessive or<br/>                 10 someone to say that the 2018 levels<br/>                 11 reflect underprescribing or just about<br/>                 12 are exactly right. I'm not taking a<br/>                 13 position on which of those three<br/>                 14 possibilities are the case.<br/>                 15 Q. Okay.<br/>                 16 A. I'm also not even taking a<br/>                 17 position on whether the drivers of<br/>                 18 legitimate or medically necessary opioids<br/>                 19 evolved gradually. I'm just saying if<br/>                 20 you assume they evolve gradually and you<br/>                 21 assume that the 2007 -- the 1997 and 2018<br/>                 22 levels are about right, then this is an<br/>                 23 interpolated benchmark and anything above<br/>                 24 that is excessive.</p> |

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| <p style="text-align: right;">Page 218</p> <p>1 Again, not expressing an<br/>                 2 opinion on any kind of epidemiological,<br/>                 3 any public health, any legal, any medical<br/>                 4 issue in the case. I'm just reporting<br/>                 5 out the data. And this is an<br/>                 6 illustration of that.<br/>                 7 I'm reporting what the data<br/>                 8 would tell us if you apply these<br/>                 9 assumptions in that paragraph you just<br/>                 10 read.<br/>                 11 Q. So it's fair to say that you<br/>                 12 are not taking into account how many new<br/>                 13 opioid formulations were approved by the<br/>                 14 FDA between '97 and 2018?<br/>                 15 A. No, I don't think that's<br/>                 16 true.<br/>                 17 Q. You think you are taking<br/>                 18 that into account, in your interpolated<br/>                 19 line you're using?<br/>                 20 A. Well, sure. To the extent<br/>                 21 that the 2018 levels are about three<br/>                 22 times the 1997 levels, if -- and this is<br/>                 23 per capita, so we're already controlling<br/>                 24 for the change in the population in Ohio</p>                            | <p style="text-align: right;">Page 220</p> <p>1 upper -- possible upper bound assumes<br/>                 2 that the evolution in those conditions or<br/>                 3 the acceptance of opioid use for<br/>                 4 treatments evolved gradually rather than<br/>                 5 discontinuously as you read.<br/>                 6 Q. And did you take that into<br/>                 7 account somehow in calculating that<br/>                 8 interpolated baseline from '97 to 2018?<br/>                 9 A. Yes, exactly.<br/>                 10 Q. But how? So aside from just<br/>                 11 looking at the data itself, did you<br/>                 12 qualitatively take into account<br/>                 13 increases, if any, in cancer or other<br/>                 14 pain-related diagnoses over that time?<br/>                 15 Did you go out and look at studies for<br/>                 16 these things or talk to experts in the<br/>                 17 field about this? Did you take that into<br/>                 18 account other than just crunching the<br/>                 19 data numbers?<br/>                 20 A. Well, those are two<br/>                 21 different questions. But the answer to<br/>                 22 your last question is no.<br/>                 23 Q. The answer to the first<br/>                 24 question?</p> |
| <p style="text-align: right;">Page 219</p> <p>1 and these counties. So the fact that the<br/>                 2 2018 levels are so much higher than the<br/>                 3 1997 levels, even after the big decline,<br/>                 4 may reflect the additional approved drugs<br/>                 5 or treatments that you've just mentioned.<br/>                 6 Q. Did you specifically take<br/>                 7 into account whether any new opioid<br/>                 8 formulations were approved by the FDA<br/>                 9 between 1997 and 2018?<br/>                 10 A. Not beyond what's reflected<br/>                 11 in the 2018 data.<br/>                 12 Q. Aside from ways that it<br/>                 13 might be reflected in the data itself,<br/>                 14 did you take into account health<br/>                 15 insurance coverage for any of these drugs<br/>                 16 over time?<br/>                 17 A. No.<br/>                 18 Q. Aside from how any of this<br/>                 19 may be reflected in the data itself, did<br/>                 20 you take into account about the growth of<br/>                 21 cancer or other pain-related diseases<br/>                 22 during that time?<br/>                 23 A. Yes. In addition to how it<br/>                 24 would be reflected in the 2018 data, my</p> | <p style="text-align: right;">Page 221</p> <p>1 A. Yes.<br/>                 2 I'm sorry. The answer to<br/>                 3 the first question is yes. The answer to<br/>                 4 the second question is no.<br/>                 5 Q. And your answer to the first<br/>                 6 question is yes because you think that's<br/>                 7 reflected in the data that you used to<br/>                 8 get to the 2018 point?<br/>                 9 A. No, not that only. It's<br/>                 10 also the assumption that those factors<br/>                 11 evolved gradually over time, and so I'm<br/>                 12 interpolating between those two values,<br/>                 13 the 1997 level and the 2018 level, by<br/>                 14 assuming a constant percentage growth.<br/>                 15 Q. So it shakes out to be a<br/>                 16 near linear growth between 1997 and 2018,<br/>                 17 it looks like?<br/>                 18 A. Right. It's a constant<br/>                 19 annual growth, so the line curves a<br/>                 20 little bit. But yes.<br/>                 21 Q. And on what basis do you<br/>                 22 make that assumption?<br/>                 23 A. That it's a useful<br/>                 24 illustration of a potential baseline.</p>  |

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| <p style="text-align: right;">Page 222</p> <p>1 Q. So you had the start --<br/> 2 sorry -- strike that.<br/> 3 You had the start data point<br/> 4 in '97 and the end data point in 2018.<br/> 5 What methodology did you use to chart the<br/> 6 curve as between '97 and 2018?<br/> 7 (Telephonic interruption.)<br/> 8 THE WITNESS: Well, you're<br/> 9 probably familiar with the rule of<br/> 10 72, which says if you take a<br/> 11 percentage growth rate in<br/> 12 percentage terms and divide it<br/> 13 into 72, it gives you the number<br/> 14 of years it takes for something to<br/> 15 double. So let me give you an<br/> 16 example.<br/> 17 Let's say that the ending<br/> 18 value is twice the beginning<br/> 19 value. And you've got a 12-year<br/> 20 period. That would mean that six<br/> 21 percent compound growth over<br/> 22 12 years would cause the ending<br/> 23 value to be twice the beginning<br/> 24 value.</p>                        | <p style="text-align: right;">Page 224</p> <p>1 necessary or legitimate, and the<br/> 2 drivers of that legitimate opioid<br/> 3 use evolved gradually over time,<br/> 4 in my example a 6 percent growth<br/> 5 rate would be reasonable as<br/> 6 opposed to some discontinuous<br/> 7 change in what would be medically<br/> 8 necessary or legitimate.<br/> 9 I am not expressing an<br/> 10 opinion anywhere here about what<br/> 11 is medically necessary or<br/> 12 legitimate. I'm just trying to<br/> 13 provide some context, some<br/> 14 description of how this model<br/> 15 might be useful to the court.<br/> 16 BY MS. McENROE:<br/> 17 Q. How did you choose to apply<br/> 18 that methodology to get from 1997 to<br/> 19 2018, rather than, for example, a<br/> 20 straight line or a curve that curved in<br/> 21 the other direction? I mean, concave<br/> 22 instead of convex and vice versa. On<br/> 23 what basis?<br/> 24 A. Well, it's really just my</p>  |
| <p style="text-align: right;">Page 223</p> <p>1 And so, what I did was<br/> 2 really a variant on that. I've<br/> 3 got the 2018 per capita<br/> 4 consumption. I've got the 1997<br/> 5 per capita consumption. The ratio<br/> 6 of those two raised to the<br/> 7 power -- you do this in Excel --<br/> 8 but raised to the power of one<br/> 9 divided by the number of years<br/> 10 would give you that constant<br/> 11 annual growth rate.<br/> 12 That's the calculation that<br/> 13 I did, and then used that constant<br/> 14 annual growth rate each year<br/> 15 applied to the 1997 starting value<br/> 16 and each prior year as you move<br/> 17 forward, and you end up at the<br/> 18 2018 level.<br/> 19 All I'm doing is saying, if<br/> 20 it's true, if -- I'm assuming if<br/> 21 it's true that the 1997 levels are<br/> 22 medically necessary or legitimate<br/> 23 or whatever term you want to use,<br/> 24 and the 2018 levels are medically</p> | <p style="text-align: right;">Page 225</p> <p>1 intuition, that these were two useful<br/> 2 examples. I could implement the<br/> 3 alternatives that you suggest. They are<br/> 4 real -- really trivially different than<br/> 5 what I did. And if I did those four,<br/> 6 there could be four more examples.<br/> 7 What I'm describing here is<br/> 8 a general methodology that might be<br/> 9 useful to the court. And I've provided<br/> 10 two illustrations, but you can -- you can<br/> 11 specify other illustrations.<br/> 12 Q. What was the basis of your<br/> 13 expertise for interpolating that line in<br/> 14 that way, for this particular setting?<br/> 15 A. Well, I have a Ph.D. in<br/> 16 economics. I have -- I have probably had<br/> 17 hundreds of semester hours of<br/> 18 arithmetic --<br/> 19 Q. Sure. So let me stop you<br/> 20 there. I -- I don't mean to quibble<br/> 21 about your computational bases for doing<br/> 22 that.<br/> 23 I'm saying from a<br/> 24 methodological standpoint, in terms of</p> |

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| <p style="text-align: right;">Page 226</p> <p>1 picking how to get from one point to<br/> 2 another in Figure 24, which is on<br/> 3 Page 85, I think it might be the easiest<br/> 4 way for us to look at this. On what<br/> 5 basis are you doing it in this way?<br/> 6 A. I'm not being articulate. I<br/> 7 thought I had answered that a whole bunch<br/> 8 of times.<br/> 9 Q. Yeah, so let me ask the<br/> 10 question a different way, because I'm not<br/> 11 trying to say from a math standpoint how<br/> 12 you get from one line to the other. What<br/> 13 I'm trying to say is, from a healthcare,<br/> 14 from an epidemiology perspective, from a<br/> 15 pharmaceutical industry perspective, how<br/> 16 is it that you're telling the court that<br/> 17 this is the right line to be looking as<br/> 18 an upper bound?<br/> 19 A. I'm not doing that. I've<br/> 20 said that several times today. I'm not a<br/> 21 subject matter expert. I'm not offering<br/> 22 an opinion in any section of the report,<br/> 23 but including on this page in that<br/> 24 figure, based on some subject matter</p> | <p style="text-align: right;">Page 228</p> <p>1 referring to?<br/> 2 A. Yes. Well, that would be an<br/> 3 example of it, yes.<br/> 4 Q. Okay. And so you are not<br/> 5 suggesting that the numbers that you have<br/> 6 reflected here for an upper bound or a<br/> 7 baseline is medically necessarily the<br/> 8 appropriate line. You are giving this as<br/> 9 a frame of reference?<br/> 10 A. Yes. We might use the terms<br/> 11 a little bit differently, but they are<br/> 12 illustrations. You could imagine even<br/> 13 above or below the '97 levels or the 2018<br/> 14 levels as being legitimate or medically<br/> 15 necessary.<br/> 16 All I'm really doing is<br/> 17 saying you can get from '97 to 2018 a<br/> 18 couple of different ways. You could get<br/> 19 it between those two levels, and other<br/> 20 ways as well.<br/> 21 And however you create the<br/> 22 baseline, whatever those baseline MME per<br/> 23 capita are, you could subtract those<br/> 24 baseline amounts each year from what's</p>         |
| <p style="text-align: right;">Page 227</p> <p>1 expertise. Other witnesses will be<br/> 2 offering the court that expertise.<br/> 3 I'm just saying, if the<br/> 4 expertise and the facts are developed<br/> 5 that support these assumptions, this is<br/> 6 the baseline. If -- if the facts are<br/> 7 developed in a different way, then a<br/> 8 variant on this would be developed. I'm<br/> 9 just describing the general methodology<br/> 10 and two illustration.<br/> 11 Q. Thank you. So on Page 86,<br/> 12 in Paragraph 159 that we were just<br/> 13 looking at a minute ago. There is a<br/> 14 sentence towards the bottom that says,<br/> 15 "My estimates."<br/> 16 Do you see that?<br/> 17 A. Yes.<br/> 18 Q. It says, "My estimates of<br/> 19 excessive opioid shipments into Ohio can<br/> 20 be varied to reflect how much if any of<br/> 21 the increase from 1997 to 2008 in per<br/> 22 capita MME above the 1997 levels was<br/> 23 medically justifiable."<br/> 24 Is that what you were just</p>   | <p style="text-align: right;">Page 229</p> <p>1 actually shipped into Cuyahoga and<br/> 2 Summit, and get an excess. I'm not --<br/> 3 I'm not opining about --<br/> 4 Q. Sure.<br/> 5 A. -- what the right baseline<br/> 6 is or what the right resulting excessive<br/> 7 amount is.<br/> 8 Q. And when you say excessive,<br/> 9 again that's in the way we were talking<br/> 10 about it earlier this afternoon,<br/> 11 excessive as in being higher than<br/> 12 something, so in excess of something?<br/> 13 A. Well, as I'm using it that's<br/> 14 correct. I'm just calculating the<br/> 15 difference between two numbers and<br/> 16 calling them excessive.<br/> 17 Now, at trial, if -- if the<br/> 18 jury were to conclude that one of these<br/> 19 baselines was correct or some variant on<br/> 20 it, then the amount above that would seem<br/> 21 to me to be excessive in their judgment.<br/> 22 But that's not something that -- that I'm<br/> 23 opining on in any way. And I'm not using<br/> 24 the term that way.</p> |



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| <p style="text-align: right;">Page 230</p> <p>1 Q. And there would need to be<br/>2 other expert, in fact, evidence in the<br/>3 record to be able to get to that point.<br/>4 You can't just get there from what you<br/>5 have in your expert reports, correct?<br/>6 A. Absolutely.<br/>7 Q. Okay. So let's take a look,<br/>8 still, I'm on Page 87 now, and you have a<br/>9 number of bullet points. And I think<br/>10 this is technically still part of<br/>11 Paragraph 159. And you have a number of<br/>12 bullet points here on 87 and then the top<br/>13 of 88 that use the word "excessive."<br/>14 And is this all throughout<br/>15 your report consistent with how we've<br/>16 been discussing the use of the term<br/>17 "excessive" here, not that you're making<br/>18 a qualitative judgment, but that you're<br/>19 making a quantitative observation?<br/>20 A. Yes. I'm not using the term<br/>21 "excessive" in -- in any -- in any sort<br/>22 of liability sense, or sense that it<br/>23 might be used in the argument. It's just<br/>24 a difference in two numbers.</p> | <p style="text-align: right;">Page 232</p> <p>1 A. Yes.<br/>2 Q. In final form as submitted?<br/>3 A. Only in final form as<br/>4 submitted.<br/>5 Q. And when did you see<br/>6 Dr. Cutler's report?<br/>7 A. Sometime after March 25th.<br/>8 Q. I gave you -- I think the<br/>9 version I gave you has a little purple<br/>10 flag in it?<br/>11 A. Yes.<br/>12 MS. McENROE: And for<br/>13 plaintiffs' counsel's benefit,<br/>14 it's on -- at Table J-1 in<br/>15 Appendix 3 of Dr. Cutler's report.<br/>16 BY MS. McENROE:<br/>17 Q. Do you see that?<br/>18 A. Yes.<br/>19 Q. Does this table look<br/>20 familiar to you?<br/>21 A. I believe I saw this table<br/>22 or this page sometime after my report was<br/>23 filed.<br/>24 Q. Did you prepare this table?</p>   |
| <p style="text-align: right;">Page 231</p> <p>1 MS. McENROE: Can we go off<br/>2 the record for a quick second?<br/>3 THE VIDEOGRAPHER: Off the<br/>4 record at 3:20 p.m.<br/>5 (Short break.)<br/>6 THE VIDEOGRAPHER: We are<br/>7 back on the record at 3:23 p.m.<br/>8 BY MS. McENROE:<br/>9 Q. Dr. McCann, I'm going to<br/>10 hand you what we've marked as Exhibit 6.<br/>11 (Document marked for<br/>12 identification as Exhibit<br/>13 McCann-6.)<br/>14 MS. McENROE: I have another<br/>15 copy.<br/>16 BY MS. McENROE:<br/>17 Q. This is another expert<br/>18 report submitted by plaintiffs in this<br/>19 case on behalf of Professor David Cutler.<br/>20 You mentioned Professor Cutler earlier<br/>21 today, correct?<br/>22 A. Yes.<br/>23 Q. Have you seen this report<br/>24 before?</p>  | <p style="text-align: right;">Page 233</p> <p>1 A. No.<br/>2 Q. Did you provide this to<br/>3 Professor Cutler?<br/>4 A. I didn't personally.<br/>5 Q. Did somebody from SLCG<br/>6 provide this to Professor Cutler?<br/>7 A. Not to Professor Cutler. It<br/>8 may be that a table, something like that,<br/>9 was provided to the counsel that we were<br/>10 interacting with. And it was provided to<br/>11 counsel Professor Cutler was interacting<br/>12 with. And Professor Cutler then<br/>13 included, I don't know, but I did not and<br/>14 my staff did not have any communication<br/>15 with Professor Cutler.<br/>16 Q. I looked, but I couldn't<br/>17 find this Table J-1 in any of your expert<br/>18 reports submitted in this case or any of<br/>19 the appendices. Do you have any reason<br/>20 to think that it is included in any of<br/>21 your expert reports or any of your<br/>22 appendices you've included?<br/>23 A. I don't know one way or the<br/>24 other.</p> |

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1 Q. So this table could be, but  
2 you don't know?  
3 A. Correct.  
4 Q. And on what basis are you  
5 saying that?  
6 A. Well, because I -- I  
7 provided you with something like 5,000  
8 tables. And I can't say with certainty  
9 that this table, or substantially this  
10 table or content that could be used to  
11 easily create this table isn't anywhere  
12 in any -- my report or my two  
13 supplements.  
14 Q. Let's take a look --  
15 A. I could do a search for that  
16 if you'd like, but I just can't tell you  
17 for sure one way or the other as I sit  
18 here.  
19 Q. Sure. Let's take a look at  
20 your supplemental expert report submitted  
21 on April 3rd.  
22 A. Yes.  
23 Q. And earlier today you  
24 described this to me as supplemental

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1 tables in the body of your report.  
2 Figures and tables used in depositions,  
3 right?  
4 A. Yes.  
5 Q. You had some summary tables?  
6 A. Yes.  
7 Q. Does this table at J-1 in  
8 Professor Cutler's report appear anywhere  
9 in your first supplemental report, to  
10 your knowledge?  
11 MR. MOUGEY: Asked and  
12 answered.  
13 BY MS. McENROE:  
14 Q. It's okay. You can answer.  
15 MR. MOUGEY: It depends on  
16 how many times we ask it. I  
17 haven't said much today. But, I  
18 mean, he just said he didn't know.  
19 MS. McENROE: Well, I'm  
20 narrowing the question a little  
21 bit. That was a broad --  
22 MR. MOUGEY: If he doesn't  
23 know if he was anywhere, how is he  
24 going to know if it was in this

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1 report?  
2 MS. McENROE: You can object  
3 to form. It's memorialized on the  
4 record.  
5 MR. MOUGEY: That's the  
6 first thing I've said -- I mean, I  
7 just -- today. I think I've  
8 objected three times in --  
9 MS. McENROE: I appreciate  
10 that.  
11 MR. MOUGEY: -- six hours.  
12 Y'all should read your  
13 transcripts. Y'all object every  
14 13 seconds. So I just -- I  
15 just -- I mean, it's asked and  
16 answered. He said he didn't know  
17 where it was.  
18 MS. McENROE: Okay. He can  
19 answer now. Thank you.  
20 MR. MOUGEY: You're welcome.  
21 BY MS. McENROE:  
22 Q. Go ahead.  
23 A. I don't know.  
24 Q. Let's take a look back to

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1 your March 25th report, in particular, to  
2 Paragraphs 181, 182, and 183, which are  
3 towards the end at Page 93 to 94. Let me  
4 know when you're there.  
5 A. I'm there.  
6 Q. And this section is labeled  
7 "Conclusion," correct?  
8 A. Yes.  
9 Q. And Paragraph 181 says,  
10 "Based upon my comparison of the ARCOS  
11 data produced by the DEA, the public  
12 ARCOS retail drug summary reports, and  
13 the defendants' transactional data, I  
14 conclude that -- after correcting a  
15 relatively small number of records -- the  
16 ARCOS data produced by the DEA is  
17 complete and reliable."  
18 Did I read that correctly?  
19 A. Yes.  
20 Q. That's an opinion you're  
21 advancing in this litigation?  
22 A. Yes.  
23 Q. And then Paragraph 182, "I  
24 further conclude that Cardinal Health's

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| <p style="text-align: right;">Page 238</p> <p>1 transactional" -- "transaction records<br/> 2 produced in discovery are a reliable<br/> 3 source of transactions data before 2006<br/> 4 and after 2014. More generally, with the<br/> 5 exception of AmerisourceBergen, the other<br/> 6 defendants' transaction data is also a<br/> 7 reliable source of transaction data for<br/> 8 the periods covered by its production."<br/> 9 Did I read that correctly?<br/> 10 A. Yes.<br/> 11 Q. And that's an opinion that<br/> 12 you're advancing in this litigation?<br/> 13 A. Yes.<br/> 14 Q. Paragraph 183, "The ARCOS<br/> 15 data can be used to identify transactions<br/> 16 in a state, county, zip code, or<br/> 17 individual pharmacy meeting certain<br/> 18 criteria as I have illustrated above."<br/> 19 Did I read that correctly?<br/> 20 A. Yes.<br/> 21 Q. And that's an opinion that<br/> 22 you're advancing in this litigation?<br/> 23 A. Yes.<br/> 24 Q. Are you advancing any other</p>                | <p style="text-align: right;">Page 240</p> <p>1 reading Paragraph 181 into the record,<br/> 2 there should be an apostrophe after<br/> 3 defendants. You read it as<br/> 4 transactional. It says transaction data.<br/> 5 Q. Sorry about that.<br/> 6 A. So there's little quibbles<br/> 7 like that. And there's a place where I'm<br/> 8 talking about a three-digit zip code in<br/> 9 Arizona, it's 851. And in the paragraph,<br/> 10 851 is mentioned three or four times.<br/> 11 And one time a four gets slipped in<br/> 12 there. It's 8451 or something like that.<br/> 13 It's obvious that there<br/> 14 should be an apostrophe there or that<br/> 15 four shouldn't have been in the<br/> 16 three-digit zip code.<br/> 17 Similarly, there might be an<br/> 18 example here or there of something that,<br/> 19 upon reflection, I might change. But<br/> 20 they would be trivial. It would be<br/> 21 literally typos, the way the typos are<br/> 22 that I've just described to you. But<br/> 23 there's nothing material that I would<br/> 24 change in any of these reports.</p> |
| <p style="text-align: right;">Page 239</p> <p>1 opinions in this litigation?<br/> 2 MR. MOUGEY: Objection.<br/> 3 THE WITNESS: Well, yes, of<br/> 4 course. These are one or<br/> 5 two-sentence summaries of what in<br/> 6 the body of the report might be 20<br/> 7 or 30 pages. And so I think at a<br/> 8 very high level these summarize my<br/> 9 opinions.<br/> 10 BY MS. McENROE:<br/> 11 Q. Are there any other high<br/> 12 level categories of opinions that's not<br/> 13 articulated here in your conclusion<br/> 14 section in your primary report?<br/> 15 A. Only to the extent they are<br/> 16 not otherwise discussed earlier in this<br/> 17 report or in the two supplements.<br/> 18 Q. Is there anything, sitting<br/> 19 here today, that you'd like to correct or<br/> 20 modify in your original report or either<br/> 21 of your two supplements? Taking into<br/> 22 account the errata sheet for Page 35.<br/> 23 A. Well, I noticed a typo here<br/> 24 or there. For instance, as you were</p> | <p style="text-align: right;">Page 241</p> <p>1 Q. Any -- anything come to mind<br/> 2 in particular of something that you would<br/> 3 change? And I'm not talking about<br/> 4 typographical errors.<br/> 5 A. No.<br/> 6 Q. Okay. Can we flip back to<br/> 7 Paragraph 22 in your primary report.<br/> 8 In both this report and in<br/> 9 your second supplemental report, you<br/> 10 include the same language that's at<br/> 11 Paragraph 22. It's the page -- it's at<br/> 12 the top of Page 7.<br/> 13 It says, "I continue to<br/> 14 review documents and gather information<br/> 15 and reserve the right to update my<br/> 16 analysis and opinions based upon that<br/> 17 further review of documents and based on<br/> 18 any new information -- including possibly<br/> 19 reports of other experts -- I may<br/> 20 receive."<br/> 21 Do you see that?<br/> 22 A. Yes.<br/> 23 Q. Do you have a present<br/> 24 intention to supplement your report for a</p>   |

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| <p style="text-align: right;">Page 242</p> <p>1 third time?</p> <p>2 MR. MOUGEY: Objection.</p> <p>3 THE WITNESS: Well, almost</p> <p>4 definitely, yes.</p> <p>5 BY MS. McENROE:</p> <p>6 Q. And tell me what you mean by</p> <p>7 that.</p> <p>8 A. Well, just yesterday</p> <p>9 AmerisourceBergen produced data that was</p> <p>10 supposed to be produced previously and</p> <p>11 which I called attention to in this first</p> <p>12 report.</p> <p>13 I also called attention to</p> <p>14 other defendants whose production seems</p> <p>15 to be missing months or NDC codes or even</p> <p>16 years.</p> <p>17 And to the extent what I'm</p> <p>18 trying to do here is reconcile the data,</p> <p>19 the defendants' transaction data produced</p> <p>20 in discovery with the ARCOS data and</p> <p>21 create a dataset that's reliable that the</p> <p>22 court can rely on, if the defendants --</p> <p>23 well, first, I will want to review the</p> <p>24 data that AmerisourceBergen produced</p>   | <p style="text-align: right;">Page 244</p> <p>1 goal of ending up with a set of</p> <p>2 transaction data that the court can rely</p> <p>3 on.</p> <p>4 Q. Aside from data issues or</p> <p>5 issues identified by defendants' experts,</p> <p>6 do you have any intention to supplement</p> <p>7 your expert report again based on other</p> <p>8 of plaintiffs' expert reports?</p> <p>9 A. No.</p> <p>10 Q. Other than potentially</p> <p>11 correcting for data that's been produced</p> <p>12 only recently or potential issues</p> <p>13 identified by defendants' counsels, do</p> <p>14 you have any other substantive intention</p> <p>15 to modify or supplement your report? And</p> <p>16 what I mean by that is, for example,</p> <p>17 changing one of the five approaches</p> <p>18 you've used?</p> <p>19 A. No. Although in your</p> <p>20 question I think you have to include not</p> <p>21 only data that was only produced</p> <p>22 recently, yesterday, but additional data</p> <p>23 that might be produced by the defendants</p> <p>24 in the future.</p> |
| <p style="text-align: right;">Page 243</p> <p>1 yesterday and see if -- it's clear I was</p> <p>2 showing you a figure earlier, we were</p> <p>3 looking at, where that new data would</p> <p>4 fill in a bunch of yellow bars on that</p> <p>5 figure.</p> <p>6 It also would change some of</p> <p>7 the numbers in, for instance, Table 13</p> <p>8 and 14.</p> <p>9 So for this report to be</p> <p>10 accurate now, given the updated data that</p> <p>11 was produced after this report was</p> <p>12 produced, I'll have to make some changes</p> <p>13 to those two tables. And if other</p> <p>14 defendants produce other data, I would</p> <p>15 have to update the figures and tables to</p> <p>16 reflect that.</p> <p>17 And I understand that your</p> <p>18 experts will be filing expert reports</p> <p>19 this weekend. And if combing through</p> <p>20 tens of thousands of lines of code,</p> <p>21 someone identifies a line of code that</p> <p>22 maybe we should have written differently</p> <p>23 or inserted in a different order, I'll</p> <p>24 evaluate that, with -- entirely with the</p> | <p style="text-align: right;">Page 245</p> <p>1 Q. Going forward?</p> <p>2 A. Yes.</p> <p>3 Q. Okay. Is there any reason</p> <p>4 why you could not answer my questions</p> <p>5 truthfully today or any of the other</p> <p>6 defendants' questions today or tomorrow</p> <p>7 truthfully?</p> <p>8 A. No. And I'm -- I'm doing my</p> <p>9 best. If I'm understanding them, then</p> <p>10 I'm answering them truthfully.</p> <p>11 Q. I appreciate that.</p> <p>12 And you understand that you</p> <p>13 have the obligation to tell us if</p> <p>14 anything in your report is false or</p> <p>15 inaccurate?</p> <p>16 A. Absolutely.</p> <p>17 Q. Okay. And is it possible</p> <p>18 that in relying on your staff for some of</p> <p>19 the underlying work that they did, that</p> <p>20 they could have made mistakes or errors?</p> <p>21 A. Well, we're all humanly</p> <p>22 imperfect. We're certainly doing our</p> <p>23 very best to create this dataset, but it</p> <p>24 may be there would be some de minimus</p>   |

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| <p style="text-align: right;">Page 246</p> <p>1 issue that you would identify and I would<br/> 2 accept as something we could do<br/> 3 differently or a judgment that could be<br/> 4 exercised reasonably in an alternative.<br/> 5 Q. And you're saying de<br/> 6 minimus. But it's also possible they<br/> 7 could have made a big mistake<br/> 8 hypothetically, correct?<br/> 9 A. It's -- I don't believe that<br/> 10 that's the case. But I can't say with<br/> 11 100 percent certainty that that is not<br/> 12 the case. I -- I don't believe it's the<br/> 13 case.<br/> 14 Q. But it's possible which<br/> 15 would make your opinions, some of them at<br/> 16 least, could potentially be untrue and<br/> 17 you wouldn't know it?<br/> 18 A. Well, it's sort of<br/> 19 topological as you've posed it. And so I<br/> 20 can't disagree with it. But I -- I do<br/> 21 not believe that there is any material<br/> 22 error that would affect any of the<br/> 23 conclusions. At a high level, the<br/> 24 conclusions are -- seem unobjectionable</p> | <p style="text-align: right;">Page 248</p> <p>1 Q. Well, the federal court said<br/> 2 that your opinions were fraudulent<br/> 3 because they said you testified knowing<br/> 4 they were false at the time. But the<br/> 5 appellate court said it wasn't that you<br/> 6 knowingly testified that it was false,<br/> 7 and I'm not accusing you of having done<br/> 8 that, but the Fifth Circuit was that it<br/> 9 was that your staff had made a<br/> 10 significant error leading you to testify<br/> 11 inaccurately; is that correct?<br/> 12 MR. MOUGEY: Objection.<br/> 13 THE WITNESS: No, that's<br/> 14 still not a correct<br/> 15 characterization of the Fifth<br/> 16 Circuit's opinion.<br/> 17 BY MS. McENROE:<br/> 18 Q. But you know what I'm<br/> 19 talking about?<br/> 20 A. I do. Of course. I lived<br/> 21 it for a couple of years.<br/> 22 (Document marked for<br/> 23 identification as Exhibit<br/> 24 McCann-7.)</p> |
| <p style="text-align: right;">Page 247</p> <p>1 until at least you get to Section 9. And<br/> 2 I think that we have the same goal up<br/> 3 through Section 9, and in Section 9, all<br/> 4 I'm doing is applying methodologies to<br/> 5 the best of our ability.<br/> 6 If it turned out that those<br/> 7 methodologies are not appropriate or some<br/> 8 slight variation on those methodologies<br/> 9 is warranted, we would do that for the<br/> 10 court as well.<br/> 11 Q. And you've previously had an<br/> 12 experience where your staff made a<br/> 13 significant error in a case in which<br/> 14 you've testified, correct?<br/> 15 A. I'm not sure what you're<br/> 16 referring to.<br/> 17 Q. You're not sure, with a<br/> 18 federal court having called your opinions<br/> 19 fraudulent, you don't recall that?<br/> 20 A. Oh my gosh.<br/> 21 I recall a situation where a<br/> 22 federal court said that and an appeals<br/> 23 court said that there was no basis for<br/> 24 that.</p>  | <p style="text-align: right;">Page 249</p> <p>1 BY MS. McENROE:<br/> 2 Q. So I'm going to hand you<br/> 3 what I'm marking Exhibit 7.<br/> 4 A. Thank you.<br/> 5 Q. This is the District Court<br/> 6 opinion, not the Fifth Circuit opinion.<br/> 7 But this is the District Court opinion<br/> 8 from Morgan Keegan &amp; Company versus<br/> 9 Garrett, correct?<br/> 10 A. Correct.<br/> 11 Q. And is this the case we were<br/> 12 just talking about, where the District<br/> 13 Court referred to your testimony as<br/> 14 having been fraudulent, right?<br/> 15 A. Yes.<br/> 16 Q. And if we could, you can<br/> 17 hold that aside. And can you pull out<br/> 18 the exhibit with your resumé, please. So<br/> 19 that's Appendix 1 to your March 25th<br/> 20 report.<br/> 21 A. Yes.<br/> 22 Q. And which exhibit number was<br/> 23 that for the record?<br/> 24 A. 4.</p>   |



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1 Q. 4. And I looked and looked,  
2 and I didn't see this Morgan Keegan &  
3 Company case referenced in your resumé.  
4 Instead what I saw was on Page 109 you  
5 have a line that says, "Dr. McCann has  
6 testified before more than 300 NASD, NYSE  
7 and FINRA arbitrations."  
8 Am I correct in that?  
9 A. Correct.  
10 Q. Okay. So you have in here  
11 300 cases from FINRA and other  
12 circumstances listed, but not fully  
13 listed out one by one, including the  
14 underlying opinion that led to the appeal  
15 to the District Court in Texas, correct?  
16 A. Correct.  
17 Q. Okay. And so looking at  
18 what you've disclosed with your expert  
19 reports, nowhere do you identify that  
20 there's an opinion that counsel could  
21 then pull and look at, in which a  
22 District Court judge, even if they were  
23 overturned, had declared you as having  
24 given fraudulent testimony, correct?

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1 MR. MOUGEY: Objection.  
2 THE WITNESS: That's not a  
3 correct characterization of this.  
4 I did not testify before  
5 Judge Hughes. In fact, I  
6 attempted to get a day in his  
7 court and it was denied. I have  
8 not, in the last 15 years,  
9 itemized the FINRA arbitrations I  
10 testify in; I've now testified in  
11 over 400.  
12 So years before the Garrett  
13 case, my resumé looked exactly  
14 like it does now, where it would  
15 say McCann has testified in 100  
16 FINRA arbitrations, 200, 300. I  
17 did not testify in Judge Hughes'  
18 court, although I certainly tried  
19 to.  
20 BY MS. McENROE:  
21 Q. But that's not the only  
22 instance in which you've had an issue  
23 with the federal court looking at your  
24 opinions, correct?

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1 So for example, I'm talking  
2 about the Freddie Mac litigation from the  
3 Southern District of New York in 2012.  
4 A. Yes.  
5 Q. Do you recall that case?  
6 A. Yes.  
7 Q. In which the judge found  
8 "McCann's analysis changed so many times  
9 in important ways and was so internally  
10 inconsistent that I found it unreliable  
11 and unpersuasive."  
12 Do you remember that?  
13 A. Yes.  
14 Q. Okay. And in that  
15 litigation you issued two reports,  
16 correct?  
17 A. Correct.  
18 Q. And in this litigation  
19 you've already issued three reports and  
20 you've testified you might provide more  
21 in the future, correct?  
22 A. Yeah, I don't think that  
23 they line up the way you are implying,  
24 but it is true that I filed a report and

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1 two small supplements in this case.  
2 MS. McENROE: I'd like to  
3 take a break.  
4 THE VIDEOGRAPHER: Off the  
5 record at 3:43 p.m.  
6 (Short break.)  
7 THE VIDEOGRAPHER: We are  
8 back on the record at 4:00 p.m.  
9 - - -  
10 EXAMINATION  
11 - - -  
12 BY MR. EPPICH:  
13 Q. Dr. McCann, my name is Chris  
14 Eppich, I represent McKesson, one of the  
15 distributors in this litigation. I'll  
16 have a few questions for you this  
17 afternoon. I -- there have already been  
18 quite a few questions. I'm going to do  
19 my best not to repeat what -- what we've  
20 heard already today. But I hope you'll  
21 bear with me.  
22 You testified earlier today  
23 that you had spoken with some former DEA  
24 employees?

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1 A. Yes.  
2 Q. You mentioned Mr. Rafalski;  
3 is that correct?  
4 A. Yes.  
5 Q. Have you ever spoken with  
6 Mr. Joe Rannazzisi?  
7 A. Yes.  
8 Q. On how many occasions?  
9 A. Just once I think.  
10 Q. And when was that?  
11 A. Sometime last summer or  
12 fall.  
13 Q. Was Mr. Rannazzisi employed  
14 by the DEA when you spoke with him?  
15 A. I don't think so.  
16 Q. Was he a consultant in the  
17 case when you spoke with him?  
18 A. I don't know, but I think  
19 so.  
20 Q. Who else was present when  
21 you spoke with Mr. Rannazzisi?  
22 A. Oh, there were a number of  
23 people, somewhere between 30 and 40  
24 people. I don't know who all they were.

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1 Q. Is this the -- are you  
2 referring to the same meeting that you  
3 met with the three or four other experts  
4 as well as a number of plaintiffs'  
5 counsel?  
6 A. No. It was a different  
7 meeting.  
8 Q. Who was present at this  
9 meeting with 30-some-odd people in it?  
10 A. Well, it was primarily  
11 plaintiffs' counsel and some of their  
12 consultants. I wasn't introduced to  
13 everybody, so I don't know who all was  
14 there. But generally plaintiffs' counsel  
15 and maybe some consultants working for  
16 plaintiffs' counsel.  
17 Q. And what was the purpose of  
18 the meeting?  
19 A. I don't know. I didn't call  
20 the meeting.  
21 Q. Do you remember any topics  
22 that were discussed during this meeting?  
23 A. Yes.  
24 Q. What were those topics?

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1 A. Most or all of the  
2 discussion dealt with the ARCOS data,  
3 what had been produced, what additional  
4 data might be produced. I'm not sure of  
5 that second topic. I'm not sure if we  
6 received all of the data that we  
7 ultimately received. The last of that  
8 data was in August of 2018. So I'm not  
9 recalling precisely whether this meeting  
10 was shortly before or shortly after.  
11 I think -- I think it was  
12 the day of my mother's funeral, which was  
13 June 12th or 10th or the day after. I  
14 returned from Canada where I grew up for  
15 that meeting. It was in my office.  
16 There were about 30 people there. I  
17 wasn't -- I wasn't entirely clear on what  
18 was going on. I was dealing with other  
19 issues.  
20 And I believe Mr. Rannazzisi  
21 was at that meeting. I remember meeting  
22 him at our break.  
23 Q. And did he speak to the  
24 group at this meeting?

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1 A. Not in any sort of formal  
2 way. There was an open discussion, and  
3 he may have contributed a thought or two  
4 to that discussion, but not -- not a  
5 presentation or some lengthy discourse.  
6 Q. So there was a meeting  
7 around June 12th of 2018 that you had  
8 attended with some of the DEA  
9 representatives. There was another  
10 meeting that you mentioned earlier where  
11 you met with some consultants and experts  
12 involved in this case.  
13 Were these the only two  
14 meetings where -- that you attended where  
15 DEA employees or former DEA employees  
16 and/or experts were present?  
17 A. I'm sorry, I offered you the  
18 June 10th or June 12th date. I could be  
19 precise, because I recall the connection  
20 to the service in Canada.  
21 I could be more precise on  
22 that date. So just allow me to say I  
23 think that's the date. And if you're  
24 interested, if it's important to you I'll

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| <p style="text-align: right;">Page 258</p> <p>1 get you the precise date.<br/>2 No. But in answer to your<br/>3 question, no, there were -- there was at<br/>4 least one or two other instances where I<br/>5 met with former DEA employees.<br/>6 Q. Did you meet with a former<br/>7 DEA employee named Kyle Wright?<br/>8 A. I don't know. I don't<br/>9 recognize that name.<br/>10 Q. Mike Mapes?<br/>11 A. I don't recognize that name.<br/>12 Q. Did you meet with Stacy<br/>13 Harper-Avilla?<br/>14 A. I don't know. I don't<br/>15 recognize that name. I did meet -- so<br/>16 the DEA employs that I recognized or<br/>17 understood to be DEA employees are four<br/>18 or five men and one woman, but I don't<br/>19 know if that's the person that you've<br/>20 just identified. I don't recognize that<br/>21 name.<br/>22 Q. Did you meet with Katherine<br/>23 Chaney?<br/>24 A. Same answer. I don't</p> | <p style="text-align: right;">Page 260</p> <p>1 Q. Have you ever spoken with<br/>2 DEA employees Keith Martin?<br/>3 A. Not that I'm aware of.<br/>4 Q. How about Tom Prevoznik?<br/>5 A. Not that I'm aware of.<br/>6 Q. June Howard?<br/>7 A. Not that I'm aware of. Let<br/>8 me explain why I say I'm -- "not that I'm<br/>9 aware of." I was on a telephone call<br/>10 very earlier with -- I mentioned earlier<br/>11 today with two or three or four people<br/>12 from the DEA. I don't know how many<br/>13 people were on the call, but set up by<br/>14 the plaintiffs' attorneys to discuss data<br/>15 that we might be receiving. So it was<br/>16 back in February or March of last year.<br/>17 And I didn't take notes of<br/>18 the names of the people who were on the<br/>19 call. There was at least one female<br/>20 voice and at least one male voice that I<br/>21 understood to be from the DEA. I don't<br/>22 know what their names were.<br/>23 Q. Generally did all of your<br/>24 conversations with these former DEA</p> |
| <p style="text-align: right;">Page 259</p> <p>1 recognize that name.<br/>2 Q. Frank Younker?<br/>3 A. I think so. One of the DEA<br/>4 employees, former employee's name was<br/>5 Frank. And that may be the person that<br/>6 you're referring to.<br/>7 Q. Is the person that you're<br/>8 thinking of a consultant to the<br/>9 plaintiffs in this litigation?<br/>10 A. Was at the time anyway.<br/>11 It's a year ago now or nearly a year ago.<br/>12 Q. Did you meet with a former<br/>13 DEA employee by the name of Jim Geldhof?<br/>14 A. I think so. That name<br/>15 sounds familiar.<br/>16 Q. How about David Schiller?<br/>17 A. Maybe, although that name is<br/>18 not familiar to me.<br/>19 Q. Christine Sannerud?<br/>20 A. Not that I'm aware. The<br/>21 name is not familiar to me.<br/>22 Q. Lou Milione?<br/>23 A. I don't think I recall that<br/>24 name. That's not familiar to me.</p>         | <p style="text-align: right;">Page 261</p> <p>1 employees involve ARCOS data?<br/>2 A. Yes.<br/>3 Q. And specifically in those<br/>4 conversations, what did they tell you<br/>5 about ARCOS data?<br/>6 A. Nothing of substance that<br/>7 sticks with me. Nothing that informs any<br/>8 of the opinions that I expressed in my<br/>9 reports or that we discussed earlier<br/>10 today.<br/>11 There was a lot of kind of<br/>12 telling war stories standing around the<br/>13 watercooler about the ARCOS data. I<br/>14 don't recall anything of substance. As I<br/>15 said, nothing that informs any of the<br/>16 opinions that I expressed.<br/>17 Q. Did any of the war stories<br/>18 include any of the defendants in this<br/>19 litigation?<br/>20 A. I don't recall.<br/>21 Q. Do you recall the war<br/>22 stories involving the distributors<br/>23 McKesson or Cardinal Health or<br/>24 AmerisourceBergen, for example?</p>   |

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| <p style="text-align: right;">Page 262</p> <p>1 A. No, I'm sorry, I don't<br/> 2 recall. What I recall was more the<br/> 3 difficulty of in the field getting quick<br/> 4 pulls on the ARCOS data and how difficult<br/> 5 the ARCOS data was to -- was for them to<br/> 6 access and produce reports from.<br/> 7 It was from very early on in<br/> 8 our accumulation of the data and<br/> 9 processing and understanding of the data.<br/> 10 And so they were in some sense<br/> 11 foreshadowing for us the data that we<br/> 12 were to receive. We end up with kind of<br/> 13 a different experience with that data<br/> 14 than they had. But they were conveying<br/> 15 their experience with the data. That's<br/> 16 what I recall.<br/> 17 Q. And to be clear, their<br/> 18 experience with the data, or at least the<br/> 19 experiences that they were discussing<br/> 20 with you from their time in the field<br/> 21 offices, they were describing ARCOS data<br/> 22 and reports as difficult to obtain?<br/> 23 A. Well, those were my words.<br/> 24 I don't recall a year later now, a casual</p> | <p style="text-align: right;">Page 264</p> <p>1 informs any of the opinions that I<br/> 2 expressed -- that I hold or express.<br/> 3 Q. Do you remember any other<br/> 4 topics that you may have discussed with<br/> 5 these former DEA employees?<br/> 6 A. No.<br/> 7 Q. If we could turn to<br/> 8 Exhibit 2 or 3, your report, and I'll<br/> 9 refer specifically to the March 25th<br/> 10 report. If we can turn to Page 75.<br/> 11 A. Yes.<br/> 12 Q. Page 75 includes Table 32.<br/> 13 And this table, if you -- if you look at<br/> 14 certain entries, there are N/As and there<br/> 15 are zeros.<br/> 16 A. Yes.<br/> 17 Q. What does an N/A represent?<br/> 18 A. Well, in general it would be<br/> 19 nonapplicable as opposed to nonavailable,<br/> 20 or not applicable as opposed to not<br/> 21 available.<br/> 22 Q. So it means --<br/> 23 A. It's just what we were<br/> 24 referring to earlier as -- as the cage</p>   |
| <p style="text-align: right;">Page 263</p> <p>1 conversation, the exact words that were<br/> 2 used. Just that -- that from the field<br/> 3 offices that they would request a report,<br/> 4 and that it took some time.<br/> 5 So difficult to obtain, I<br/> 6 don't mean that there was a lot of<br/> 7 paperwork to fill out or that it took<br/> 8 months, but it wasn't instantaneous or in<br/> 9 minutes the way we can create reports<br/> 10 from this ARCOS data today given our data<br/> 11 capabilities.<br/> 12 Q. And did they describe to you<br/> 13 or tell you when a change happened at DEA<br/> 14 where ARCOS data was more readily<br/> 15 available to them?<br/> 16 A. Well, I think that assumes<br/> 17 facts not in evidence. I don't recall<br/> 18 them telling me that things have changed.<br/> 19 I just am describing to you what I recall<br/> 20 them conveying to me about their<br/> 21 experience and nothing that particularly<br/> 22 sticks with me. That's -- that's the<br/> 23 only part of the discussion that sticks<br/> 24 with me. And none -- none of that</p>        | <p style="text-align: right;">Page 265</p> <p>1 vault rule. I've just heard that term<br/> 2 used generally.<br/> 3 And I think if you look at<br/> 4 that footnote that is earlier here that<br/> 5 cites to a two-page document, I don't<br/> 6 think oxymorphone is one of the drugs in<br/> 7 that list, and that's why the column says<br/> 8 N/A. We could check that, but that's my<br/> 9 recollection.<br/> 10 The other places where it's<br/> 11 N/A as opposed to zero, I just have to<br/> 12 check. I'm not certain.<br/> 13 Q. Well, as a general rule, and<br/> 14 I -- and I didn't mean to -- to confuse<br/> 15 you or make you hone in on the fact that<br/> 16 Table 32 is about maximum daily dosage<br/> 17 unit threshold by transaction.<br/> 18 Just generally in your<br/> 19 tables, what does N/A mean?<br/> 20 A. Not applicable.<br/> 21 Q. And what does a zero mean?<br/> 22 A. Well, that we ran the<br/> 23 methodology and it didn't flag any<br/> 24 orders.</p> |

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| <p style="text-align: right;">Page 266</p> <p>1 Q. So in your mind what's the<br/> 2 difference between an N/A and a zero?<br/> 3 A. Well, this is actually a<br/> 4 really good illustration of that. Maybe<br/> 5 at least my thinking about how those<br/> 6 terms might be used.<br/> 7 So if we look at that source<br/> 8 document that's cited in the footnote on<br/> 9 Page 72, it gives daily limits for<br/> 10 different drugs. And it does not, my<br/> 11 recollection, give a daily limit for<br/> 12 oxymorphone. It does give a limit for<br/> 13 the other drugs. And so if a distributor<br/> 14 doesn't ship a drug, then there might be<br/> 15 an N/A -- a drug for which there is a<br/> 16 daily limit in that source document.<br/> 17 There might be an N/A if they do ship<br/> 18 that drug, but never does that drug<br/> 19 exceed the daily limit, then there would<br/> 20 be a zero. That's the way I would<br/> 21 interpret those two.<br/> 22 I might -- I might go back<br/> 23 and check to see if there's some<br/> 24 situation where we wrote N/A when a zero</p> | <p style="text-align: right;">Page 268</p> <p>1 legitimate intended uses to illicit<br/> 2 activities.<br/> 3 Q. Do you agree that diversion<br/> 4 is a crime?<br/> 5 A. I have no -- no opinion --<br/> 6 MR. MOUGEY: Objection.<br/> 7 Outside the scope.<br/> 8 THE WITNESS: -- one way or<br/> 9 the other.<br/> 10 BY MR. EPPICH:<br/> 11 Q. Are you planning to offer<br/> 12 any opinions about whether or not any of<br/> 13 the defendants diverted prescription<br/> 14 opioids in this litigation?<br/> 15 A. No.<br/> 16 Q. I'd like to turn back to<br/> 17 Page 56 of your report. Page 56 is the<br/> 18 start of Section 9, transaction analysis,<br/> 19 you'll recall.<br/> 20 I'd like to return to the --<br/> 21 the five methodologies that you implement<br/> 22 to identify what you call flagged orders.<br/> 23 Okay?<br/> 24 A. Yes.</p>  |
| <p style="text-align: right;">Page 267</p> <p>1 would be appropriate or where we wrote a<br/> 2 zero when an N/A would be appropriate.<br/> 3 But looking at this example<br/> 4 you've pointed me to, that would be the<br/> 5 interpretation that I would take from it.<br/> 6 Q. Now, Dr. McCann, have you<br/> 7 ever heard the term "diversion" used in<br/> 8 connection with prescription opioids?<br/> 9 A. Yes.<br/> 10 Q. What does diversion mean to<br/> 11 you?<br/> 12 A. I only have the very vaguest<br/> 13 of kind of layman's understanding of that<br/> 14 term. I don't -- I don't have an<br/> 15 understanding that would be helpful here,<br/> 16 I don't think. I'm happy to tell you<br/> 17 what it is, but I'm not sure that it's<br/> 18 helpful.<br/> 19 Q. Yeah, please.<br/> 20 A. Sure. So I would just say<br/> 21 it sounds like it's related to diverted<br/> 22 and that diversion means that some drugs,<br/> 23 some prescription drugs were diverted<br/> 24 from their intended use, or from their</p>  | <p style="text-align: right;">Page 269</p> <p>1 Q. You testified earlier that<br/> 2 the plaintiffs' counsel provided these<br/> 3 five methodologies for identifying<br/> 4 flagged transactions to you, correct?<br/> 5 A. Yes.<br/> 6 Q. You didn't come up with the<br/> 7 five methodologies yourself?<br/> 8 A. No.<br/> 9 Q. You have no opinion of -- on<br/> 10 whether any of the five methodologies is<br/> 11 appropriate for evaluating whether or<br/> 12 not -- or, excuse me. Let me strike<br/> 13 that.<br/> 14 You have no opinion on<br/> 15 whether any of the five methodologies are<br/> 16 appropriate for identifying what you call<br/> 17 flagged transactions, correct?<br/> 18 A. Correct.<br/> 19 Q. There may be other<br/> 20 appropriate methodologies for -- for --<br/> 21 let me strike that.<br/> 22 You'd agree there may be<br/> 23 other appropriate methodologies for<br/> 24 flagging suspicious orders, correct?</p> |



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| <p style="text-align: right;">Page 270</p> <p>1 A. Yes.</p> <p>2 Q. But you have no opinion</p> <p>3 about the other methods of flagging</p> <p>4 suspicious orders, correct?</p> <p>5 A. Or even that they exist. I</p> <p>6 just allow, in your previous question,</p> <p>7 that they may exist. I don't have an</p> <p>8 opinion one way or another on -- on any</p> <p>9 of the subject matter material.</p> <p>10 Q. You used algorithms to</p> <p>11 identify the first flagged transactions</p> <p>12 in these methodologies?</p> <p>13 A. Yes.</p> <p>14 Q. And then you flagged every</p> <p>15 transaction after that, correct?</p> <p>16 A. Correct.</p> <p>17 Q. That was according to</p> <p>18 plaintiff -- plaintiffs' counsel's</p> <p>19 instruction, correct?</p> <p>20 A. Correct.</p> <p>21 Q. And you did that for all</p> <p>22 five methodologies?</p> <p>23 A. Correct.</p> <p>24 Q. You did not use your</p>   | <p style="text-align: right;">Page 272</p> <p>1 methodologies?</p> <p>2 A. I'm sorry, what do you mean</p> <p>3 by developed?</p> <p>4 Q. Well, you wrote algorithms</p> <p>5 for each of these five methodologies,</p> <p>6 correct?</p> <p>7 A. Correct.</p> <p>8 Q. Who wrote those algorithms?</p> <p>9 A. Well, it was a joint effort</p> <p>10 of -- so at a very high level you can</p> <p>11 think of the instruction about which</p> <p>12 algorithms to use and the assumption that</p> <p>13 once a transaction is flagged, everything</p> <p>14 on that day and thereafter is flagged.</p> <p>15 You could think of that as part of</p> <p>16 developing or writing the algorithm.</p> <p>17 So plaintiffs' counsel, some</p> <p>18 discussion of that between me and -- and</p> <p>19 my staff and plaintiffs' counsel, and</p> <p>20 then the actual programming of those</p> <p>21 rules, members of my staff.</p> <p>22 Q. It's true that none of your</p> <p>23 methodologies was ever used by a</p> <p>24 distributor to identify suspicious</p> |
| <p style="text-align: right;">Page 271</p> <p>1 algorithm in the five methodologies to</p> <p>2 identify any of the subsequent</p> <p>3 transactions that you flagged after the</p> <p>4 first transaction?</p> <p>5 A. If I understand that</p> <p>6 question, is the same as the question</p> <p>7 asked earlier today. The methodologies</p> <p>8 flagged that first transaction and</p> <p>9 everything after that gets flagged. So,</p> <p>10 in some complete description, the</p> <p>11 methodology does flag those later</p> <p>12 transactions, because it flags the first</p> <p>13 one and every one that follows.</p> <p>14 But the methodology is not</p> <p>15 reapplied to each transaction anew. I --</p> <p>16 I guess is the way I would say it.</p> <p>17 Q. Another way to say that</p> <p>18 would be there's no computational</p> <p>19 analysis on any of the subsequent</p> <p>20 transactions after that first flagged</p> <p>21 transaction, correct?</p> <p>22 A. Correct.</p> <p>23 Q. Who developed your</p> <p>24 algorithms for each of these five</p> | <p style="text-align: right;">Page 273</p> <p>1 orders, correct?</p> <p>2 A. I don't know one way or the</p> <p>3 other.</p> <p>4 Q. And are you offering any</p> <p>5 opinions or do you plan to offer any</p> <p>6 opinions about whether or not your five</p> <p>7 methodologies were ever used by a</p> <p>8 distributor to -- to identify suspicious</p> <p>9 orders?</p> <p>10 A. No.</p> <p>11 Q. Do you have any experience</p> <p>12 with any of the distributors' suspicious</p> <p>13 order monitoring programs?</p> <p>14 A. No.</p> <p>15 Q. You didn't review any</p> <p>16 distributor testimony in this case, did</p> <p>17 you?</p> <p>18 A. No.</p> <p>19 Q. You didn't review the</p> <p>20 suspicious order monitoring programs for</p> <p>21 any distributor in this case?</p> <p>22 A. No.</p> <p>23 Q. You didn't review McKesson's</p> <p>24 Section 55 of its operations manual?</p>  |

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| <p style="text-align: right;">Page 274</p> <p>1 A. Not that I'm aware of. If<br/>         2 I -- if I did, it didn't stick with me.<br/>         3 Q. You didn't review McKesson's<br/>         4 lifestyle drug monitoring program?<br/>         5 A. Same answer.<br/>         6 Q. You didn't review McKesson's<br/>         7 controlled substance monitoring program?<br/>         8 A. No. Not that I'm aware of.<br/>         9 Q. You didn't review<br/>         10 AmerisourceBergen's suspicious order<br/>         11 monitoring programs?<br/>         12 A. No, not that I'm aware of.<br/>         13 Q. You didn't review Cardinal<br/>         14 Health's suspicious order monitoring<br/>         15 programs?<br/>         16 A. No, not that I'm aware of.<br/>         17 Q. You have no opinions about<br/>         18 McKesson's suspicious order monitoring<br/>         19 program?<br/>         20 A. Correct.<br/>         21 Q. Do you plan to offer any<br/>         22 opinions about McKesson's suspicious<br/>         23 order monitoring program?<br/>         24 A. No.</p> | <p style="text-align: right;">Page 276</p> <p>1 Q. Now, we talked -- we've<br/>         2 talked about the five methodologies at<br/>         3 length today. I just have a few<br/>         4 follow-up questions.<br/>         5 Which -- which of the<br/>         6 methodologies considers legitimate<br/>         7 pharmacy growth over time?<br/>         8 A. As distinct from illicit or<br/>         9 illegitimate pharmacy growth? I'm not<br/>         10 sure I -- I follow that. Take<br/>         11 "legitimate" out of the question --<br/>         12 Q. Fair enough. Let me strike<br/>         13 the question, and I'll re-ask the<br/>         14 question.<br/>         15 Which methodologies consider<br/>         16 pharmacy growth over time?<br/>         17 A. All five of them, but<br/>         18 primarily the first three.<br/>         19 Q. How does the maximum monthly<br/>         20 trailing six-month threshold consider or<br/>         21 account for pharmacy growth over time?<br/>         22 A. Well, to the extent that<br/>         23 pharmacies receipt of a drug increases<br/>         24 over time, it gets flagged under that</p>                     |
| <p style="text-align: right;">Page 275</p> <p>1 Q. Do you have any opinions<br/>         2 about AmerisourceBergen's suspicious<br/>         3 order monitoring program?<br/>         4 A. No.<br/>         5 Q. And do you intend to offer<br/>         6 any opinions about AmerisourceBergen's<br/>         7 suspicious order monitoring program?<br/>         8 A. No.<br/>         9 Q. Do you have any opinions<br/>         10 about Cardinal Health's suspicious order<br/>         11 monitoring program?<br/>         12 A. No.<br/>         13 Q. Do you intend to offer any<br/>         14 opinions about Cardinal Health's<br/>         15 suspicious order monitoring program?<br/>         16 A. No.<br/>         17 Q. Do you have any opinions<br/>         18 about any other distributors' suspicious<br/>         19 order monitoring programs?<br/>         20 A. No.<br/>         21 Q. Do you intend to offer any<br/>         22 opinions about any other distributors'<br/>         23 suspicious order monitoring programs?<br/>         24 A. No.</p>                             | <p style="text-align: right;">Page 277</p> <p>1 method. So it considers the growth. And<br/>         2 if the pharmacy's shipments increase, at<br/>         3 some point the shipments -- a shipment<br/>         4 and the shipments thereafter get flagged.<br/>         5 Q. Is it your opinion that a<br/>         6 flagged order, or what you call a flagged<br/>         7 order indicates the growth of the<br/>         8 pharmacy?<br/>         9 A. Well, by definition it does<br/>         10 in this section, right? Because the only<br/>         11 way an order gets flagged is if in a<br/>         12 month the pharmacy receives more drugs<br/>         13 than it received at the maximum in the<br/>         14 previous six months. And that's growth,<br/>         15 right? That's a higher number in the<br/>         16 seventh month than in the previous six<br/>         17 months.<br/>         18 Q. What are some reasons why a<br/>         19 pharmacy may grow over time?<br/>         20 MR. MOUGEY: Outside the<br/>         21 scope. Objection.<br/>         22 THE WITNESS: I don't know.<br/>         23 I haven't thought through those<br/>         24 issues.</p> |

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1 BY MR. EPPICH:  
2 Q. Now, you say that your  
3 methodology flags orders, correct?  
4 A. Yes.  
5 Q. If the distributors had  
6 refused to ship each of your flagged  
7 orders, would any legitimate  
8 prescriptions have gone unfilled?  
9 MR. MOUGEY: Objection.  
10 THE WITNESS: I don't know.  
11 BY MR. EPPICH:  
12 Q. Are you planning to offer  
13 any opinions in this case as to whether  
14 or not distributors' refusal to ship  
15 would result in any legitimate  
16 prescriptions having gone unfilled?  
17 MR. MOUGEY: Objection.  
18 THE WITNESS: Not as I sit  
19 here.  
20 BY MR. EPPICH:  
21 Q. Now, if the distributors had  
22 refused to ship each of your flagged  
23 orders, would that have prevented the  
24 opioid crisis?

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1 MR. MOUGEY: Objection.  
2 THE WITNESS: I have no  
3 idea. No opinion one way or the  
4 other.  
5 BY MR. EPPICH:  
6 Q. And do you plan to offer any  
7 opinions about whether or not  
8 distributors play a role or played a role  
9 in causing or preventing the opioid  
10 crisis?  
11 MR. MOUGEY: Objection.  
12 THE WITNESS: No. As with a  
13 lot of this stuff, that's going to  
14 be the subject of other experts'  
15 reports and testimony.  
16 BY MR. EPPICH:  
17 Q. Now, you used ARCOS data for  
18 your methodologies, correct?  
19 MR. MOUGEY: Objection.  
20 THE WITNESS: Along with  
21 other data. But, yes, I used  
22 ARCOS data.  
23 BY MR. EPPICH:  
24 Q. And you understand that

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1 registrants are required to submit ARCOS  
2 data to the DEA on a monthly or quarterly  
3 basis?  
4 MR. MOUGEY: Objection.  
5 THE WITNESS: That's my  
6 general understanding. I don't  
7 have an expert opinion or expert  
8 understanding. But in context, as  
9 part of the context, I have, when  
10 analyzing the data, that's my  
11 understanding.  
12 BY MR. EPPICH:  
13 Q. And based on your review of  
14 this ARCOS data, would you agree that  
15 registrants have submitted accurate data  
16 to DEA?  
17 A. I would say it a little bit  
18 differently, but something very close to  
19 that.  
20 Q. How would you say it?  
21 A. Well, what I see is not  
22 necessarily exactly what registrants  
23 submit to the DEA.  
24 What I see is what the DEA

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1 produced to me. And so I want to make  
2 that slight qualification.  
3 And an example of that would  
4 be, there's 20 or 21 days where I think  
5 for Ohio there are no Cardinal Health  
6 transactions in ARCOS. I may have the  
7 jurisdictions slightly off. But there's  
8 a period there where there are a bunch of  
9 Cardinal Health transactions that were  
10 produced in discovery in this case, to  
11 pharmacies over a 20 or 21-day period  
12 that is not in the ARCOS data produced to  
13 me by the DEA.  
14 And so I can't say that that  
15 data was produced by Cardinal Health to  
16 the DEA and they just didn't produce it  
17 to me, or in the alternative, that  
18 Cardinal Health didn't produce those  
19 21 days of transactions to the DEA.  
20 Setting aside an issue like  
21 that, what I would say is that the data  
22 that I received from the DEA as ARCOS  
23 data is consistent after fixing a few  
24 things, largely consistent with the data

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| <p style="text-align: right;">Page 282</p> <p>1 that the defendants produced in this case<br/>         2 in discovery. It's a little bit<br/>         3 different than what you said, but it's<br/>         4 close.<br/>         5 Q. So to restate, you'd agree<br/>         6 that the ARCOS data that the DEA provided<br/>         7 to you was accurate?<br/>         8 A. That's certainly how I<br/>         9 shorthanded in a sentence or two a couple<br/>         10 of times in the report. But if you read<br/>         11 the entire report what I'm saying is that<br/>         12 the ARCOS data that I received after<br/>         13 making some corrections on allowing for<br/>         14 some periods where they don't match<br/>         15 perfectly, match the defendant<br/>         16 transaction data produced in discovery<br/>         17 quite closely.<br/>         18 Q. You're aware that only the<br/>         19 DEA has access to ARCOS data?<br/>         20 A. I don't know if that's true.<br/>         21 I don't know one way or another.<br/>         22 Q. Are you aware that<br/>         23 distributors could not see the ARCOS data<br/>         24 of any other distributor?</p>                     | <p style="text-align: right;">Page 284</p> <p>1 applied and the results of applying those<br/>         2 methodologies to the ARCOS data for<br/>         3 Cuyahoga and Summit, supplemented with<br/>         4 the defendants' transaction data<br/>         5 produced.<br/>         6 I'm not sure what -- I don't<br/>         7 understand the applicability of the<br/>         8 Controlled Substances Act or the<br/>         9 regulations they're under to the<br/>         10 calculations that I've done. So I don't<br/>         11 know if it's consistent or not<br/>         12 consistent. I don't see the connection<br/>         13 between them.<br/>         14 Q. And do you intend to offer<br/>         15 any opinions in this case about whether<br/>         16 or not your methodologies comply with the<br/>         17 Controlled Substances Act or its<br/>         18 regulations?<br/>         19 MR. MOUGEY: Objection.<br/>         20 THE WITNESS: Not as I sit<br/>         21 here. I don't see the connection,<br/>         22 as I just said.<br/>         23 BY MR. EPPICH:<br/>         24 Q. If we can look at Page 56 of</p>   |
| <p style="text-align: right;">Page 283</p> <p>1 A. I don't know if that's true.<br/>         2 I don't know one way or the other.<br/>         3 Q. Do you plan on offering any<br/>         4 opinions about whether or not a<br/>         5 distributor has access to ARCOS data?<br/>         6 MR. MOUGEY: Objection.<br/>         7 THE WITNESS: Not other than<br/>         8 to their own data, I don't have an<br/>         9 opinion one way or the other.<br/>         10 BY MR. EPPICH:<br/>         11 Q. Do your methodologies comply<br/>         12 with the Controlled Substance Act and the<br/>         13 applicable DEA regulations?<br/>         14 A. I'm not familiar with the<br/>         15 details of the Controlled Substance Act<br/>         16 or the applicable regulations. But there<br/>         17 seems to be a disconnect between whatever<br/>         18 is in those documents and what I've<br/>         19 described here as my methodologies.<br/>         20 Q. What is that disconnect?<br/>         21 A. Well, by a disconnect, I<br/>         22 mean in layman's terms they are kind of<br/>         23 apples and oranges. I've described in<br/>         24 the reports the methodologies that I</p> | <p style="text-align: right;">Page 285</p> <p>1 your report, sir, at Paragraph 132. This<br/>         2 has been the subject of some questioning<br/>         3 earlier today.<br/>         4 And I'm referring to the<br/>         5 assumption that is stated in<br/>         6 Paragraph 132, where you write, "In this<br/>         7 approach" -- and I think we've<br/>         8 established that Paragraph 132 is<br/>         9 applying to all five methodologies.<br/>         10 "In" -- "in this approach<br/>         11 and the others implemented below, I have<br/>         12 been asked by counsel to assume that the<br/>         13 distributor did not effectively<br/>         14 investigate the flagged transactions, and<br/>         15 so every subsequent transaction of that<br/>         16 drug code is also flagged because the<br/>         17 distributor had an unfulfilled obligation<br/>         18 to detect and investigate the first<br/>         19 flagged transaction."<br/>         20 Did I read that correctly?<br/>         21 A. Yes.<br/>         22 Q. What did you do to evaluate<br/>         23 the validity of this assumption?<br/>         24 A. Nothing. It was just an</p> |

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1 assumption that I was asked to make. And  
 2 I implemented it.  
 3 There -- if the evidence  
 4 were to be developed in some other way,  
 5 the methodology could be applied to some  
 6 variant on this assumption. But this was  
 7 the assumption that I was asked to make  
 8 based on -- on what I understand other  
 9 witnesses may testify about. And  
 10 ultimately whatever the court decides on  
 11 this issue could be -- could inform the  
 12 application of this tool to create a  
 13 different set of flagged transactions  
 14 from the same underlying data.  
 15 Q. So you didn't review any  
 16 documents or deposition testimony or  
 17 any -- any other evidence in this case  
 18 to -- to validate the assumption?  
 19 A. Correct.  
 20 Q. You have no knowledge about  
 21 whether distributors had an unfulfilled  
 22 obligation to detect and investigate the  
 23 first flagged transaction?  
 24 MR. MOUGEY: Objection.

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1 THE WITNESS: Right, I  
 2 said -- as I said, I think that's  
 3 outside the scope of the analysis  
 4 that I was asked to do. And I  
 5 wouldn't have particular subject  
 6 matter expertise that would be  
 7 relevant in any case.  
 8 All I was asked to do was to  
 9 assume that after a transaction  
 10 gets flagged, the subsequent  
 11 transactions are also flagged.  
 12 BY MR. EPPICH:  
 13 Q. It's true that you don't  
 14 even know if distributors have an  
 15 obligation to detect and investigate the  
 16 first flagged transaction, correct?  
 17 MR. MOUGEY: Objection.  
 18 THE WITNESS: As a result of  
 19 understanding the context of this  
 20 litigation, I have sort of a  
 21 general layman's understanding,  
 22 but I don't have an expert  
 23 understanding or an expert opinion  
 24 on the subject.

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1 BY MR. EPPICH:  
 2 Q. Are you planning to offer  
 3 any opinions about any distributor  
 4 obligation to detect and investigate what  
 5 you call the first flagged transaction?  
 6 MR. MOUGEY: Objection.  
 7 THE WITNESS: No. That will  
 8 be for other witnesses.  
 9 BY MR. EPPICH:  
 10 Q. Now, if a distributor did,  
 11 in fact, detect and investigate the first  
 12 flagged transaction, your methodology  
 13 would incorrectly flag every subsequent  
 14 transaction for that base code and  
 15 pharmacy, wouldn't it?  
 16 MR. MOUGEY: Objection.  
 17 THE WITNESS: I would say it  
 18 differently.  
 19 I would say that I was asked  
 20 to assume that there was not  
 21 effective due diligence, or  
 22 rather, that when one of these  
 23 algorithms flags a transaction to  
 24 a pharmacy, the subsequent

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1 transactions should also be  
 2 flagged.  
 3 If the evidence were to be  
 4 developed that during some time  
 5 periods that's a reasonable  
 6 assumption and in other time  
 7 periods it's not, or it's a  
 8 reasonable assumption for some  
 9 pharmacies and not others, or for  
 10 some distributors and not others,  
 11 or some other variation on this  
 12 assumption, then those alternative  
 13 assumptions could be implemented  
 14 in the algorithm that I've  
 15 developed here on the data that  
 16 we've cleaned and processed.  
 17 I've given you an  
 18 illustration of one set of  
 19 assumptions, one fact pattern if  
 20 you will. If -- if an alternative  
 21 fact pattern is developed and a  
 22 jury is convinced of that  
 23 alternative fact pattern, then the  
 24 analysis would be different. It



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| <p style="text-align: right;">Page 290</p> <p>1 would be the same general<br/> 2 methodology, but the results would<br/> 3 be different because it would --<br/> 4 it would be based on a different<br/> 5 set of assumptions.<br/> 6 BY MR. EPPICH:<br/> 7 Q. So under this different set<br/> 8 of assumptions where a distributor<br/> 9 detects and investigates the first<br/> 10 flagged order, you'd agree that the<br/> 11 results would be different and the<br/> 12 methodology that we see in this report<br/> 13 would be incorrectly flagging every<br/> 14 subsequent transaction?<br/> 15 MR. MOUGEY: Objection.<br/> 16 THE WITNESS: No. I would<br/> 17 not say it that way. I apologize<br/> 18 for being wordy.<br/> 19 But the way I would say it<br/> 20 is that -- that if the -- take a<br/> 21 situation where there's a<br/> 22 particular order that is the first<br/> 23 flagged order in this application<br/> 24 for a particular distributor and</p>        | <p style="text-align: right;">Page 292</p> <p>1 report?<br/> 2 A. I apologize, yes. If the<br/> 3 facts were to be developed to the jury's<br/> 4 satisfaction, to the court's<br/> 5 satisfaction, different from the assumed<br/> 6 facts in this illustration, then the<br/> 7 algorithms would have to be run under<br/> 8 that new set of assumed facts and it<br/> 9 would generate different results.<br/> 10 Q. Now, I believe you testified<br/> 11 earlier today that you ran some of the<br/> 12 data without the plaintiffs' assumption.<br/> 13 Did I understand that testimony<br/> 14 correctly?<br/> 15 A. Yes.<br/> 16 Q. That was in preparing for<br/> 17 this report?<br/> 18 A. No. That was earlier than<br/> 19 that.<br/> 20 Q. But that -- that analysis is<br/> 21 not found in your report, correct?<br/> 22 A. Correct.<br/> 23 Q. Now, when -- when you did<br/> 24 that, what were the results that you saw?</p> |
| <p style="text-align: right;">Page 291</p> <p>1 pharmacy. And the evidence was<br/> 2 developed that that order was<br/> 3 investigated, cleared and shipped,<br/> 4 then the methodology would just be<br/> 5 applied allowing for that<br/> 6 transaction. And -- so it's the<br/> 7 same methodology.<br/> 8 I'm not -- I'm not seeing --<br/> 9 maybe I'm -- I apologize. I may<br/> 10 not be seeing the distinction<br/> 11 between this question and the<br/> 12 answer I gave to the prior<br/> 13 question.<br/> 14 BY MR. EPPICH:<br/> 15 Q. And I apologize if I'm<br/> 16 confusing you. And let me try and<br/> 17 simplify the question.<br/> 18 If a distributor were to<br/> 19 detect and investigate the first flagged<br/> 20 order and your methodology applied that<br/> 21 assumption, you'd agree with me that the<br/> 22 results of the flagged subsequent<br/> 23 transactions would be different than what<br/> 24 we see in the charts and graphs of your</p> | <p style="text-align: right;">Page 293</p> <p>1 A. Well, as I said earlier, you<br/> 2 end up with fewer transactions being<br/> 3 flagged for sort of obvious reasons.<br/> 4 Q. So you'd agree that your<br/> 5 reliance on plaintiffs' counsel<br/> 6 assumption to flag every subsequent<br/> 7 transaction increased the number of<br/> 8 flagged transactions?<br/> 9 MR. MOUGEY: Objection.<br/> 10 Asked and answered.<br/> 11 Are we -- are we going to --<br/> 12 are we going to go through the<br/> 13 same questions we did this<br/> 14 morning? I mean, that's -- that's<br/> 15 the third time he's answered that<br/> 16 question.<br/> 17 MR. EPPICH: I'm doing my<br/> 18 best but I --<br/> 19 MR. MOUGEY: I hear you, but<br/> 20 when we -- I'm --<br/> 21 MR. EPPICH: Keep your<br/> 22 objection as to form.<br/> 23 MR. MOUGEY: I mean, the<br/> 24 fact that we are allowing</p>                                     |

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1 different counsel to ask questions  
 2 doesn't mean we're going to sit  
 3 and ask the same questions. I  
 4 mean, some of these questions are  
 5 almost verbatim of what we went  
 6 through this morning fishing for a  
 7 different answer.  
 8 MR. EPPICH: I disagree with  
 9 that, sir.  
 10 MR. MOUGEY: I mean, I can  
 11 almost cut and paste these and put  
 12 them on top.  
 13 And I think if y'all haven't  
 14 coordinated who is going to take  
 15 what topics, I think we need to  
 16 make sure we do that for tomorrow.  
 17 Because these questions are almost  
 18 verbatim to what we went through  
 19 this morning. I could answer  
 20 them.  
 21 BY MR. EPPICH:  
 22 Q. Sir, you may answer the  
 23 question.  
 24 A. If you assume 100 percent

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1 due diligence, you don't flag very many  
 2 orders. If you assume zero due  
 3 diligence, you flag more orders. And  
 4 this model is flexible enough to  
 5 incorporate different sets of facts  
 6 developed about the extent of due  
 7 diligence between zero and 100 percent.  
 8 Q. If we could turn to  
 9 Paragraph 131 of your report which is on  
 10 Page 56. This is the first paragraph  
 11 under the maximum monthly trailing  
 12 six-month threshold.  
 13 A. Yes.  
 14 Q. In Paragraph 131 of your  
 15 report, you provide an example. You say,  
 16 "If the number of dosage units containing  
 17 hydrocodone shipped from a distributor to  
 18 a pharmacy in February, March, April,  
 19 May, June, and July were 5,000, 10,000,  
 20 7,000, 8,000, 9,000, and 9,500  
 21 respectively, a requested transaction in  
 22 August would be flagged if it would cause  
 23 the number of dosage units containing  
 24 hydrocodone the distributor shipped to

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1 the pharmacy to exceed 10,000."  
 2 Did I read that correctly?  
 3 A. Yes.  
 4 Q. So if the pharmacy ordered  
 5 10,500 in August of 1997, that order  
 6 would be flagged under your six-month  
 7 threshold analysis, correct?  
 8 MR. MOUGEY: Objection.  
 9 Asked and answered.  
 10 THE WITNESS: I'm sorry.  
 11 Which order?  
 12 BY MR. EPPICH:  
 13 Q. If the pharmacy were to  
 14 order 10,500 in August of, say, 1997,  
 15 that order would be flagged under your  
 16 six-month threshold analysis, correct?  
 17 A. I think there's some  
 18 confusion in that question. Maybe my  
 19 sentence there is not clear. I could  
 20 explain if you'd like.  
 21 Q. Well, I'm just trying to  
 22 figure out if the pharmacy ordered 10,500  
 23 in August, wouldn't that order be  
 24 flagged?

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1 A. No. I'm sorry. You're not  
 2 saying it correctly. Can I explain?  
 3 Q. Yes, please.  
 4 A. So it's not an order of  
 5 10,500. It's probably a weekly order of  
 6 2,000, 3,000, 2,000, 4,000, 1,500. And  
 7 it's the last order that puts you above  
 8 10,000. And it's that order, it's the  
 9 order that puts you above 10,000. So you  
 10 keep saying the order of 10,500. It's  
 11 not an order of 10,500 typically.  
 12 And it's that order or the  
 13 orders that day in that drug code and the  
 14 subsequent orders in that drug code that  
 15 get flagged.  
 16 Q. I appreciate that  
 17 clarification.  
 18 So if the pharmacy, if their  
 19 total orders for the month of August 1997  
 20 were 10,500 by the end of the month, the  
 21 last order that they had would be flagged  
 22 under your six-month threshold analysis,  
 23 correct?  
 24 A. In my example. But it may

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1 not be the last order that triggers the  
2 flag, right. It could be the  
3 second-to-last order. But whatever the  
4 orders are on that day in that drug code  
5 and the rest of the orders that month,  
6 and the orders that follow, are what get  
7 flagged.  
8 Q. That's right. And so every  
9 order of the drug thereafter would be  
10 flagged for this particular pharmacy,  
11 correct?  
12 A. Correct.  
13 Q. So orders starting in  
14 September '97 or maybe even later in  
15 August 1997 until all the way to the end,  
16 let's say, 2018, those would all be  
17 flagged under your six-month threshold  
18 analysis, correct?  
19 A. Correct.  
20 Q. Even if no subsequent  
21 monthly orders totaled 10,000, correct?  
22 A. Correct.  
23 Q. Now, let's say the  
24 pharmacy -- let's say their orders for

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1 the month of August 1997 exceeded 10,000  
2 because there was an emergency, let's say  
3 a natural disaster. That last order in  
4 August would be flagged and every  
5 subsequent order would be flagged under  
6 your six-month threshold, correct?  
7 MR. MOUGEY: Objection.  
8 THE WITNESS: I'm sorry.  
9 I'm not sure that I understood  
10 that question. Could you ask it  
11 again, please.  
12 BY MR. EPPICH:  
13 Q. Of course. If a pharmacy --  
14 if an order in August of 1997 -- let me  
15 strike that.  
16 If a pharmacy ordered a  
17 total number of orders that exceeded  
18 10,000 in August of 1997 because there  
19 was an emergency, let's say a natural  
20 disaster, that order that exceeded 10,000  
21 would be flagged under your six-month  
22 threshold analysis, correct?  
23 A. If the order itself doesn't  
24 exceed 10,000, but the order causes the

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1 cumulative orders so far that month to  
2 exceed \$10,000 -- 10,000 dosage units,  
3 that's correct. Then that order -- it  
4 might be just 200 dosage units, you know,  
5 taking you from 9,900 to 10,100. So that  
6 200-dosage-unit order and all subsequent  
7 orders get flagged.  
8 Q. Even though that store  
9 ordered in excess of the limit of its  
10 previous six-month ordering because of an  
11 emergency?  
12 A. Correct, the application of  
13 the algorithm to the data doesn't take  
14 into account that or other hypotheticals  
15 that you could develop that would go  
16 either -- either way.  
17 Q. Assuming that the store  
18 ordered that same drug every month  
19 between, say, September 1997 and the end  
20 of 2018, your six-month threshold  
21 analysis would flag all of those orders  
22 as suspicious just because of that one  
23 month in 1997, correct?  
24 A. I don't think I used the

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1 word "suspicious" anywhere in this  
2 report. I just said that the order is  
3 flagged.  
4 And that's correct, the  
5 algorithm is flagging the transactions  
6 after that example transaction in your  
7 hypothetical until the end of the data.  
8 It's as equally likely to go the other  
9 way as the way you are suggesting. But  
10 the algorithm is agnostic about that.  
11 It's just applying the rule to the data.  
12 Q. I don't understand what  
13 you -- what you're saying. It's equally  
14 as likely to go the other way? Are you  
15 saying that once an order is flagged, all  
16 subsequent orders are not flagged?  
17 A. No, no. Not at all. In  
18 your example, the natural disaster occurs  
19 in the seventh month. If it occurs in  
20 the fifth month, then you've got a spike  
21 in the -- temporary spike in the  
22 shipments in the fifth month, and that  
23 raises the threshold that would be  
24 applied to judge all of the subsequent

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| <p style="text-align: right;">Page 302</p> <p>1 months.</p> <p>2 So because of the natural</p> <p>3 disaster, a bunch of orders that</p> <p>4 otherwise would be flagged are not</p> <p>5 getting flagged in your example because</p> <p>6 of the natural disaster occurring in the</p> <p>7 seventh month instead of the fifth month.</p> <p>8 You're suggesting that a bunch of orders</p> <p>9 get flagged that wouldn't otherwise get</p> <p>10 flagged.</p> <p>11 What I'm saying is, in your</p> <p>12 hypothetical it could go the other way.</p> <p>13 It could go exactly the opposite. And</p> <p>14 I'm not -- I'm not expressing an opinion</p> <p>15 other than the two that I've tried --</p> <p>16 high-level opinions that I've tried to</p> <p>17 offer, which is that you can clean up a</p> <p>18 dataset and make it useful. And you can</p> <p>19 apply algorithms, some of which I've</p> <p>20 illustrated here, to that cleaned-up</p> <p>21 data.</p> <p>22 Q. But in your maximum monthly</p> <p>23 trailing six-month threshold analysis, an</p> <p>24 order can be flagged and the order was</p> | <p style="text-align: right;">Page 304</p> <p>1 as I sit here, yes.</p> <p>2 Q. On Page 68 you introduce the</p> <p>3 maximum 8,000 dosage unit monthly</p> <p>4 methodology?</p> <p>5 A. Yes.</p> <p>6 Q. Are you aware of any</p> <p>7 distributor that has ever used your 8,000</p> <p>8 dosage units analysis to identify</p> <p>9 suspicious orders?</p> <p>10 MR. MOUGEY: Objection.</p> <p>11 THE WITNESS: That's more</p> <p>12 than I'm aware of. I have heard</p> <p>13 the 8,000 -- maximum 8,000 monthly</p> <p>14 units sometimes referred to in</p> <p>15 shorthand as the McKesson rule.</p> <p>16 But I don't know that that is a</p> <p>17 rule that was actually applied if</p> <p>18 by McKesson or anybody else.</p> <p>19 I hear that rule or that</p> <p>20 approach being described as the</p> <p>21 McKesson 8,000 rule. I don't know</p> <p>22 the origin of that</p> <p>23 characterization.</p> <p>24 BY MR. EPPICH:</p> |
| <p style="text-align: right;">Page 303</p> <p>1 placed because of a natural emergency, or</p> <p>2 perhaps it was diversion, or perhaps it</p> <p>3 was because of a new doctor moving in</p> <p>4 down the street. Your methodology</p> <p>5 doesn't account for any of those changes;</p> <p>6 isn't that correct?</p> <p>7 A. I'd say it a little bit</p> <p>8 differently, but yes.</p> <p>9 Q. Now, we talked earlier about</p> <p>10 your twice trailing 12-month average</p> <p>11 pharmacy dosage units methodology and</p> <p>12 your three times 12-month threshold</p> <p>13 analysis. Do you remember that</p> <p>14 discussion?</p> <p>15 A. Yes.</p> <p>16 Q. Now, your twice 12-month</p> <p>17 threshold analysis and your three times</p> <p>18 12-month threshold analysis are the same,</p> <p>19 just with a different multiplier; is that</p> <p>20 correct?</p> <p>21 A. Yes.</p> <p>22 Q. The only difference is the</p> <p>23 amount of the multiplier?</p> <p>24 A. That's all I could think of</p>   | <p style="text-align: right;">Page 305</p> <p>1 Q. Do you have any</p> <p>2 understanding about -- let me strike</p> <p>3 that.</p> <p>4 As you sit here today, you</p> <p>5 have no knowledge about the origin of the</p> <p>6 McKesson -- of -- let me strike that.</p> <p>7 And sitting here today, you</p> <p>8 have no opinion that this methodology was</p> <p>9 used or not used by McKesson?</p> <p>10 A. Correct.</p> <p>11 Q. Do you intend to offer any</p> <p>12 opinions in this case as to whether or</p> <p>13 not McKesson did or did not use this</p> <p>14 methodology in practice?</p> <p>15 A. No.</p> <p>16 Q. Dr. McCann, you are not a</p> <p>17 pharmacist, are you?</p> <p>18 A. No, I'm not.</p> <p>19 Q. You have no training in</p> <p>20 pharmacy science?</p> <p>21 MR. MOUGEY: We'll stipulate</p> <p>22 he's not a pharmacist. He's not a</p> <p>23 doctor --</p> <p>24 MR. EPPICH: Sir, I'm not</p>                |

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| <p style="text-align: right;">Page 306</p> <p>1 asking for your stipulation.<br/> 2 MR. MOUGEY: Well, we<br/> 3 don't -- we went through this. Do<br/> 4 you not remember this this<br/> 5 morning?<br/> 6 MR. EPPICH: I would just<br/> 7 like the -- the witness to answer<br/> 8 the question.<br/> 9 MR. MOUGEY: Do you remember<br/> 10 the answers to the questions this<br/> 11 morning about whether or not he's<br/> 12 a pharmacist?<br/> 13 MR. EPPICH: I think you<br/> 14 spend more time arguing for an<br/> 15 objection --<br/> 16 MR. MOUGEY: I promise you,<br/> 17 I haven't.<br/> 18 MR. EPPICH: -- than -- than<br/> 19 he would just answering the<br/> 20 question.<br/> 21 MR. MOUGEY: You really<br/> 22 don't remember this this morning,<br/> 23 are you a pharmacist, are you a<br/> 24 doctor? You don't remember that?</p> | <p style="text-align: right;">Page 308</p> <p>1 Q. Dr. McCann, you are aware<br/> 2 that pharmacists fill legitimate<br/> 3 prescriptions filled by legitimate<br/> 4 medical professionals?<br/> 5 A. Yes.<br/> 6 Q. And you are aware that<br/> 7 pharmacists stock their pharmacies by<br/> 8 placing orders with distributors?<br/> 9 A. Yes.<br/> 10 Q. I'd like to talk about your<br/> 11 excessive shipments analysis on Page 82<br/> 12 of your report.<br/> 13 You testified earlier that<br/> 14 you are not aware the DEA established<br/> 15 quotas for controlled substances every<br/> 16 year; is that correct?<br/> 17 A. Correct.<br/> 18 Q. Do you know that the DEA<br/> 19 sets these annual production quotas for<br/> 20 controlled substances based on the<br/> 21 estimated medical, scientific research<br/> 22 and industrial needs of the United<br/> 23 States?<br/> 24 A. No.</p>                               |
| <p style="text-align: right;">Page 307</p> <p>1 MR. EPPICH: Are you -- are<br/> 2 you instructing him not to answer<br/> 3 these questions?<br/> 4 MR. MOUGEY: I mean I'm<br/> 5 really not, but can we please be,<br/> 6 I mean, just a little careful<br/> 7 about, I mean, coordinating this<br/> 8 to some extent?<br/> 9 Can this --<br/> 10 MR. EPPICH: Let me start<br/> 11 this whole -- let me start this<br/> 12 again, sir.<br/> 13 MR. MOUGEY: Yeah, I mean,<br/> 14 you do what you feel is necessary.<br/> 15 Are you a pharmacist? I<br/> 16 mean, come on. I mean, really.<br/> 17 MR. EPPICH: I'm<br/> 18 just sitting -- I'm waiting for<br/> 19 you to finish.<br/> 20 MR. MOUGEY: Well, good.<br/> 21 I'm waiting for you to come up<br/> 22 with a question that we haven't<br/> 23 done yet.<br/> 24 BY MR. EPPICH:</p>            | <p style="text-align: right;">Page 309</p> <p>1 MR. MOUGEY: Objection.<br/> 2 Asked and answered.<br/> 3 BY MR. EPPICH:<br/> 4 Q. You didn't consider DEA's<br/> 5 quotas in setting your baselines that<br/> 6 are -- are found in your excessive<br/> 7 shipments methodology?<br/> 8 MR. MOUGEY: Objection.<br/> 9 Asked and answered.<br/> 10 THE WITNESS: Correct.<br/> 11 BY MR. EPPICH:<br/> 12 Q. Now, you know that the quota<br/> 13 levels for opioids have consistently<br/> 14 increased since 1997, don't you?<br/> 15 A. I just told you I'm not<br/> 16 aware of the quotas and I didn't include<br/> 17 them in my analysis. So I don't know how<br/> 18 to answer that question.<br/> 19 Q. Well, you'd agree that a<br/> 20 baseline rooted in sound scientific<br/> 21 principles would include something as<br/> 22 significant as the DEA consistently<br/> 23 increasing the quota?<br/> 24 MR. MOUGEY: Objection.</p> |



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1 THE WITNESS: It may or it  
 2 may not. I'm not a subject matter  
 3 expert.  
 4 BY MR. EPPICH:  
 5 Q. It's not something you  
 6 considered?  
 7 A. That's correct. I said that  
 8 a couple minutes ago.  
 9 Q. And do you plan to offer any  
 10 opinions or revise your excessive  
 11 shipments analysis to include or account  
 12 for the quotas set by the DEA?  
 13 A. Not beyond the extent to  
 14 which those quotas are already impacting  
 15 the 2018 levels, no.  
 16 Q. But sitting here today, you  
 17 don't know whether or not the baseline  
 18 you have for 2018 is impacted by quota?  
 19 A. I haven't thought through  
 20 that issue. But as you've suggested it  
 21 to me, I would just have to think through  
 22 it some more. But I'm not offering in  
 23 any case any subject matter opinion.  
 24 I'm just saying that --

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1 well, as I explained earlier, that I have  
 2 interpolated between the 1997 and the  
 3 2018 levels for the reasons I did. For  
 4 no other reasons. And that includes for  
 5 no other consideration beyond the actual  
 6 levels of 2018. However, they may or may  
 7 not be impacted by the quotas you're  
 8 describing.  
 9 Q. You don't know as you sit  
 10 here today, correct?  
 11 A. I don't know anything about  
 12 the quotas, as I said now two or three  
 13 times. They did not impact any of my  
 14 calculations including in this section.  
 15 Q. Your report classifies  
 16 shipments of prescription opioids as  
 17 excessive, correct?  
 18 A. Relative to the benchmarks  
 19 in Section 10, that's correct.  
 20 Q. Which of these shipments  
 21 should distributors have refused to ship  
 22 to their pharmacy customers?  
 23 A. In Section 10?  
 24 Q. Yes, sir.

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1 A. Section 10 doesn't deal with  
 2 individual shipments from distributors to  
 3 pharmacies. It's at a higher, more macro  
 4 level, describing the shipments into  
 5 Ohio, and into Cuyahoga and Summit, and  
 6 how those exceed the two example  
 7 baselines that I created.  
 8 Q. Yes. And earlier you -- you  
 9 explained what the -- what you meant by  
 10 excessive shipments. And so I'm asking  
 11 you, of these excessive shipments, which  
 12 of them should distributors have not  
 13 shipped to pharmacies?  
 14 A. I don't have an opinion one  
 15 way or another beyond what's expressed in  
 16 Section 10 on that topic.  
 17 Q. Were any of what you  
 18 called -- call excessive shipments  
 19 diverted?  
 20 A. I don't know.  
 21 Q. You can't point to any of  
 22 your excessive shipments that were  
 23 diverted?  
 24 MR. MOUGEY: Objection.

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1 Outside the scope.  
 2 THE WITNESS: And it's just  
 3 mischaracterizing what I did in  
 4 Section 10. I'm not identifying  
 5 individual transactions in  
 6 Section 10.  
 7 I'm just saying at a macro  
 8 level, the amount of MME per  
 9 capita shipped into Cuyahoga and  
 10 Summit went up by a factor of  
 11 eight or ten, and then came back  
 12 down by nearly 50 percent, and  
 13 I've explained how that dramatic  
 14 increase exceeds some gradual  
 15 growth from the earlier levels to  
 16 the later levels.  
 17 BY MR. EPPICH:  
 18 Q. Do you plan to offer any  
 19 opinions in this case as to whether or  
 20 not the excessive shipments that are  
 21 represented in your report in Section 10  
 22 were diverted?  
 23 A. No.  
 24 Q. Your 1997 baseline, you

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1 recall testifying about that earlier  
2 today?  
3 A. Yes.  
4 Q. Your 1997 baseline assumes  
5 all prescriptions were necessary?  
6 A. Yes.  
7 Q. Your 1997 baseline does not  
8 consider any additional factors beyond  
9 the number of prescriptions that year,  
10 correct?  
11 A. There's a whole lot of stuff  
12 it doesn't consider. Like car sales, I  
13 don't know what it is that you're  
14 referring to. I don't have any idea what  
15 you might be referring to.  
16 It doesn't include anything  
17 except the MME per capita shipped in  
18 1997.  
19 I apologize. I don't mean  
20 to get snippy. I'm getting hungry. I  
21 need a Snickers bar.  
22 Q. Would you like to take a  
23 break, sir?  
24 A. Whenever is a convenient

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1 time.  
2 MR. EPPICH: We can take a  
3 break.  
4 Let's go off the record.  
5 THE VIDEOGRAPHER: Off the  
6 record at 5:06 p.m.  
7 (Short break.)  
8 THE VIDEOGRAPHER: We are  
9 back on the record at 5:17 p.m.  
10 BY MR. EPPICH:  
11 Q. Dr. McCann, I'm handing you  
12 what we marked as McCann Exhibit 8.  
13 (Document marked for  
14 identification as Exhibit  
15 McCann-8.)  
16 THE WITNESS: Thank you.  
17 BY MR. EPPICH:  
18 Q. Dr. McCann, Exhibit 8 is  
19 Appendix 6 from your report. Do you  
20 recognize it?  
21 A. Yes.  
22 Q. Now, what is Appendix 6?  
23 A. I forget where in the report  
24 we reference it, or I reference it. But

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1 it was -- it was my attempt to aggregate  
2 up the different DEA numbers for the same  
3 defendant.  
4 Q. So in the left column, you  
5 have the company family; is that correct?  
6 A. Yes.  
7 Q. And in the middle column,  
8 you have the various entity names that  
9 are associated with that family?  
10 A. I would say it a little bit  
11 differently. In the ARCOS data I think  
12 what we see is the middle and the right  
13 column. And for purposes of creating our  
14 report, sometimes we want to create the  
15 report by defendant. And so you would  
16 have multiple DEA numbers with exactly  
17 the same name in the ARCOS data and then  
18 other times with slight variations on the  
19 name. So we just tried to aggregate  
20 those up to the best we could to a common  
21 name for each defendant.  
22 Q. So defendants' names are in  
23 the left column. Is that what you're  
24 saying?

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1 A. Correct.  
2 Q. Okay. And the entities that  
3 are associated with that defendant are in  
4 the middle column, correct?  
5 A. I'm sorry, as I would say it  
6 those are the names that we observe in  
7 the ARCOS data.  
8 Q. Okay. I don't mean to  
9 confuse you. I'm sorry about that.  
10 But let's -- let me have you  
11 turn to Page 6. It's Page 141 of your  
12 report.  
13 A. Oh. Yes.  
14 Q. Now, on Page 141 the last  
15 entry for the McKesson Corporation, is  
16 seller name Watson Pharma Incorporated.  
17 Do you see that?  
18 A. Yes.  
19 Q. Are you aware that Watson  
20 Pharma Incorporated is not a McKesson  
21 entity?  
22 A. In general, I know of a  
23 Watson entity that is distinct from  
24 McKesson. I'm not sure, as I sit here

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| <p style="text-align: right;">Page 318</p> <p>1 why -- why this particular seller name<br/>         2 and DEA number is associated with<br/>         3 McKesson. I would have to check on that.<br/>         4 Q. But if Watson Pharma --<br/>         5 or -- excuse me. If Watson Pharma Inc.<br/>         6 is not a McKesson entity, you would agree<br/>         7 with me that including Watson in the<br/>         8 McKesson family would be a mistake?<br/>         9 A. Unless there was some other<br/>         10 reason why it should be included. And<br/>         11 there may or may not be. I just don't<br/>         12 know as I sit here.<br/>         13 Q. How did you determine which<br/>         14 DEA numbers coincided with which seller's<br/>         15 family?<br/>         16 A. Well the ARCOS data gives<br/>         17 the DEA number, the seller DEA number and<br/>         18 the seller name. And so for many of them<br/>         19 it was obvious there was a direct<br/>         20 correspondence between for instance the<br/>         21 30 or 50 or 75 Cardinal Health DEA<br/>         22 numbers and Cardinal Health, and the same<br/>         23 thing for some of these others.<br/>         24 I'm thinking that to the</p> | <p style="text-align: right;">Page 320</p> <p>1 "The McKesson data is missing all<br/>         2 transactions involving 47 NDCs, 14<br/>         3 million MME."<br/>         4 A. Yes.<br/>         5 Q. Did I read that correctly?<br/>         6 A. Yes.<br/>         7 Q. It's true that nowhere in<br/>         8 your report do you state for which NDCs<br/>         9 McKesson data is missing, correct?<br/>         10 A. Well, that's not true, or<br/>         11 not completely true, anyway. Footnote 33<br/>         12 identifies three of the NDC codes that<br/>         13 account for 58 percent of that missing<br/>         14 MME. It doesn't -- it doesn't list the<br/>         15 other 44 NDCs that cover the remaining<br/>         16 42 percent. But it lists three of -- the<br/>         17 three biggest ones.<br/>         18 Q. And sitting here today, do<br/>         19 you know what NDCs you allege are missing<br/>         20 from the McKesson data?<br/>         21 A. Not as I sit here, other<br/>         22 than the three that are itemized in the<br/>         23 footnote.<br/>         24 Q. If we could turn to your</p> |
| <p style="text-align: right;">Page 319</p> <p>1 extent that there -- that there would be<br/>         2 adjustments to our list, it would be to<br/>         3 include more DEA numbers with the seller<br/>         4 family than what we've included.<br/>         5 What we've mostly done is<br/>         6 just include the obvious ones, like the<br/>         7 McKesson DEA numbers, with the exception<br/>         8 of the last two on this list for<br/>         9 McKesson. Prescription Pak, Division of<br/>         10 McKesson Corp., well, that seems obvious.<br/>         11 Watson Pharma, I just will<br/>         12 have to check to see why that particular<br/>         13 seller DEA number we've associated with<br/>         14 McKesson.<br/>         15 Q. Did you perform this<br/>         16 correlation between the seller family and<br/>         17 the seller names yourself or did someone<br/>         18 on your staff?<br/>         19 A. Someone on my staff.<br/>         20 Q. If we could turn to Page 38<br/>         21 of Exhibit 2 or 3, your report, to Page<br/>         22 38. I'm looking at Paragraph Number 93.<br/>         23 A. Yes.<br/>         24 Q. The first sentence says,</p>                                    | <p style="text-align: right;">Page 321</p> <p>1 second report, which is your supplemental<br/>         2 report dated April 3rd. And if you<br/>         3 wouldn't mind turning to Page 8 of that<br/>         4 report at Paragraph 20.<br/>         5 Paragraph 20 reads, "I was<br/>         6 provided the two pages of figures<br/>         7 attached hereto as Appendix D, which<br/>         8 purport to illustrate the total dosage<br/>         9 units of opioids shipped by McKesson to,<br/>         10 A, the United States; and, B, to Ohio."<br/>         11 Did I read that correctly?<br/>         12 A. Yes.<br/>         13 (Document marked for<br/>         14 identification as Exhibit<br/>         15 McCann-9.)<br/>         16 BY MR. EPPICH:<br/>         17 Q. Let me introduce as<br/>         18 Exhibit 9, Appendix D of your report.<br/>         19 A. Thank you.<br/>         20 Q. If we turn to page --<br/>         21 Appendix D is Page 85 of your second<br/>         22 report.<br/>         23 This contains additional<br/>         24 McKesson figures and tables, correct?</p>  |

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| <p style="text-align: right;">Page 322</p> <p>1 A. Correct.</p> <p>2 Q. What are these figures and</p> <p>3 tables?</p> <p>4 A. My understanding is that</p> <p>5 these are figures and tables that were</p> <p>6 used in depositions as demonstratives and</p> <p>7 we were asked to verify that this was our</p> <p>8 work product. I think that was the</p> <p>9 purpose of this supplemental.</p> <p>10 Q. Is this your work product,</p> <p>11 Dr. McCann?</p> <p>12 A. Yes.</p> <p>13 Q. All of the tables and</p> <p>14 figures in Appendix D?</p> <p>15 A. Yes.</p> <p>16 Q. Did you produce the</p> <p>17 underlying data files or Excel files that</p> <p>18 are -- that are associated with each of</p> <p>19 these charts and tables?</p> <p>20 A. I think so. That was our</p> <p>21 intention.</p> <p>22 Q. Do you plan to offer any</p> <p>23 opinions about these charts or tables</p> <p>24 that you have in Appendix D?</p> | <p style="text-align: right;">Page 324</p> <p>1 briefly before we went back on the</p> <p>2 record. Thank you for being here today</p> <p>3 and for your time.</p> <p>4 A. You're welcome. Thank you.</p> <p>5 Q. Before you were asked to do</p> <p>6 so by the lawyers in this litigation, did</p> <p>7 you have any experience reviewing or</p> <p>8 analyzing distributor transactional data?</p> <p>9 A. No.</p> <p>10 Q. And when I use the term</p> <p>11 "distributor transactional data," what do</p> <p>12 you understand that to mean?</p> <p>13 A. I'm sorry. I understood you</p> <p>14 to mean specifically opioid or controlled</p> <p>15 substance transaction data. We've done a</p> <p>16 tremendous amount of work on very large</p> <p>17 datasets, some of them larger than this</p> <p>18 ARCOS dataset. Some of which you could</p> <p>19 think of as involving distributors. But</p> <p>20 not pharmaceutical drugs and not</p> <p>21 distributors of pharmaceutical drugs.</p> <p>22 Q. Okay. So have -- have you</p> <p>23 ever had experience outside of this</p> <p>24 litigation reviewing or analyzing</p> |
| <p style="text-align: right;">Page 323</p> <p>1 A. Not other than to perhaps</p> <p>2 report what they illustrate.</p> <p>3 Q. Sitting here today, no one</p> <p>4 has asked you to offer any opinions about</p> <p>5 the methodologies behind these tables and</p> <p>6 figures, or what they mean?</p> <p>7 A. Correct.</p> <p>8 MR. EPPICH: Let me pass you</p> <p>9 to my colleague. We'll go off the</p> <p>10 record.</p> <p>11 THE VIDEOGRAPHER: Off the</p> <p>12 record at 5:28 p.m.</p> <p>13 (Short break.)</p> <p>14 THE VIDEOGRAPHER: We are</p> <p>15 back on the record at 5:31 p.m.</p> <p>16 - - -</p> <p>17 EXAMINATION</p> <p>18 - - -</p> <p>19 BY MR. BOEHM:</p> <p>20 Q. Welcome back after a short</p> <p>21 break.</p> <p>22 A. Thank you.</p> <p>23 Q. Mr. McCann, my name is Paul</p> <p>24 Boehm. We introduced ourselves very</p>   | <p style="text-align: right;">Page 325</p> <p>1 distributor transactional data, including</p> <p>2 sales data, purchase data, or ordering</p> <p>3 data?</p> <p>4 A. Certainly not with respect</p> <p>5 to pharmaceutical products that I can</p> <p>6 remember.</p> <p>7 Q. How about outside of</p> <p>8 pharmaceutical products, as far as you</p> <p>9 can remember?</p> <p>10 A. Well, earlier in my career,</p> <p>11 I did a fair bit of antitrust consulting.</p> <p>12 And there shipments of drugs -- I'm</p> <p>13 sorry, drugs, other products,</p> <p>14 agricultural products or automobiles or</p> <p>15 other products, and their pricing would</p> <p>16 be relevant to some of that analysis, but</p> <p>17 it's some time ago and I don't recall the</p> <p>18 details. And although I -- I was</p> <p>19 involved in some antitrust-related work</p> <p>20 in the pharmaceutical industry, it's</p> <p>21 not -- it wasn't analyzing data of the</p> <p>22 type that I've analyzed in this case.</p> <p>23 Q. Okay. Then is it fair to</p> <p>24 say that you have not, outside of this</p>                         |

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1 experience in this particular litigation,  
2 ever had the opportunity to analyze or  
3 review transactional data from wholesale  
4 drug distributors?  
5 A. Yes. At least not that I  
6 recall.  
7 Q. Do you agree that, of the  
8 five approaches that are described in  
9 your report in this case, none of them  
10 has been standardized or endorsed by the  
11 United States Drug Enforcement Agency?  
12 A. I don't know one way or the  
13 other.  
14 Q. Do you agree that none of  
15 the five approaches that you set forth in  
16 your report in this lawsuit have been  
17 adopted or mandated by federal or state  
18 statute?  
19 A. I don't know one way or the  
20 other.  
21 Q. Do you agree that none of  
22 the approaches set forth in your report  
23 have been endorsed by the Food and Drug  
24 Administration?

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1 A. I don't know one way or the  
2 other.  
3 Q. Do you know one way or  
4 another whether or not any of the five  
5 approaches that are set forth in your  
6 report for purposes of this lawsuit have  
7 been endorsed, adopted, or otherwise  
8 mandated by any regulatory agency in the  
9 United States, either federal or state?  
10 A. No.  
11 Q. Are you expressing any  
12 opinion or do you otherwise have a view  
13 about whether any of the five approaches  
14 that you describe in your report are  
15 better than any of the other approaches?  
16 A. No.  
17 Q. Do you have any opinion that  
18 you're offering at all about the quality  
19 of any one of the five approaches that  
20 you've used in your report for flagging,  
21 is the term that you use, orders?  
22 A. No.  
23 Q. Are you expressing any  
24 opinion that any one of these approaches

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1 would be more appropriate for a  
2 particular customer or for a particular  
3 geographic location or for any other kind  
4 of particularized analysis than any of  
5 the other approaches that you've set  
6 forth in your report?  
7 A. No.  
8 Q. As I understand it, in  
9 applying the metrics or approaches that  
10 are set forth in your report for flagging  
11 orders, you do not take into account any  
12 individualized characteristics of a  
13 particular pharmacy or a hospital that  
14 might place an order to a distributor; is  
15 that correct?  
16 A. Close, but not quite. So  
17 for instance in the first methodology,  
18 the first methodology includes what  
19 orders that pharmacy has placed with each  
20 distributor in the prior six months. So  
21 it takes into account some information  
22 about that pharmacy, at least in that  
23 regard. Maybe other regards, other  
24 information that it's not taking into

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1 account, but it is taking into account  
2 some information about the pharmacy.  
3 Q. Outside of order history for  
4 a particular pharmacy, do you, in  
5 applying any of the metrics or approaches  
6 described in your report, take into  
7 account any individualized  
8 characteristics of the particular  
9 pharmacies or hospitals that place orders  
10 with distributors?  
11 A. Well, there's a little  
12 confusion in that question, I apologize  
13 for pausing so long. But the Section 9  
14 analysis is on shipments to -- I'm sorry,  
15 to retail and chain pharmacies. And it  
16 excludes what is identified as a hospital  
17 in the ARCOS data. So if you take the  
18 word "and hospitals" out of your  
19 question, then I think I would agree with  
20 the implication of your question.  
21 Q. Let me just -- with that  
22 clarification, let me see if I can ask  
23 that question again in a way that makes  
24 it easier for you to answer, hopefully.



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| <p style="text-align: right;">Page 330</p> <p>1 We'll cross our fingers. I'm able to do<br/> 2 that.</p> <p>3 Outside of a particular<br/> 4 pharmacy's history of ordering<br/> 5 prescription opioid medications, do you,<br/> 6 in applying any of the metrics or<br/> 7 approaches that are described in your<br/> 8 report, take into account any<br/> 9 individualized characteristics of a<br/> 10 pharmacy that would be placing orders<br/> 11 with a distributor?</p> <p>12 A. Not other than they're a<br/> 13 retailer or chain pharmacy, no.</p> <p>14 Q. And when you add that caveat<br/> 15 about whether it's a retail or a chain<br/> 16 pharmacy, can you please describe what<br/> 17 you meant to refer to?</p> <p>18 A. Sure. In Method 2 and<br/> 19 Method 3, the two times trailing 12-month<br/> 20 national average and three times trailing<br/> 21 12-month national average, we average<br/> 22 across similar dispensers that the<br/> 23 distributor services. And so looking at<br/> 24 the ARCOS data or the individual</p>   | <p style="text-align: right;">Page 332</p> <p>1 A. Yes. At least not as I<br/> 2 sit -- as I sit here I'm not aware of any<br/> 3 other ways in which that applies.</p> <p>4 Q. As part of your application<br/> 5 of the metrics that are set forth in your<br/> 6 report in this lawsuit, did you take into<br/> 7 account the amount of total foot traffic,<br/> 8 for example, that goes through a<br/> 9 particular pharmacy?</p> <p>10 A. No, although we would have<br/> 11 if we had had that data perhaps. There<br/> 12 are some alternatives that we can<br/> 13 imagine, but it would require data that<br/> 14 has not been produced in discovery.</p> <p>15 Q. Did you take into account<br/> 16 any information about whether or not a<br/> 17 particular pharmacy that is placing<br/> 18 orders with a distributor is located<br/> 19 proximate to a long-term care facility or<br/> 20 a major hospital?</p> <p>21 A. Not beyond the impact that<br/> 22 that might have on the order history of<br/> 23 the pharmacy. I don't think so.</p> <p>24 Q. I'm not -- just to be clear,</p> |
| <p style="text-align: right;">Page 331</p> <p>1 defendant transaction data, we are -- we<br/> 2 are recognizing that the subject pharmacy<br/> 3 is a retailer or chain pharmacy, and when<br/> 4 calculating the averages across the<br/> 5 country, when we have national data and<br/> 6 it's relevant, we only look at other<br/> 7 dispensers the distributor ships to that<br/> 8 is in that same category.</p> <p>9 So the -- the category<br/> 10 matters, so that's an attribute of the<br/> 11 individual pharmacy. And the order<br/> 12 history matters in the first approach.<br/> 13 Beyond those two ways it matters. The<br/> 14 attributes of the individual pharmacy<br/> 15 matter. I'm not aware of additional ways<br/> 16 it matters.</p> <p>17 Q. Okay. Other than what you<br/> 18 just mentioned, you don't take into<br/> 19 account any individualized<br/> 20 characteristics of pharmacies who may be<br/> 21 placing orders with distributors for<br/> 22 purposes of applying the five metrics<br/> 23 or -- or methods that you set forth in<br/> 24 your report; is that fair?</p> | <p style="text-align: right;">Page 333</p> <p>1 I'm not asking about the order history.<br/> 2 I'm asking specifically whether or not as<br/> 3 part of your application of these methods<br/> 4 that you've described for flagging<br/> 5 orders, did you specifically take into<br/> 6 account whether or not a particular<br/> 7 pharmacy was proximate or not to a<br/> 8 long-term care facility or a major<br/> 9 hospital?</p> <p>10 A. What I meant by my answer<br/> 11 was, to the extent that a pharmacy is<br/> 12 close to a long-term care facility or<br/> 13 hospital or not, may affect its ordering.<br/> 14 I think that's the implication of your<br/> 15 question. And so that would also impact<br/> 16 the trailing six-month baseline unless<br/> 17 it's a newly opened hospital next to the<br/> 18 pharmacy that wasn't there during the<br/> 19 first six months.</p> <p>20 So other than the impact<br/> 21 that that proximity has on the order<br/> 22 history, no.</p> <p>23 Q. Okay. So you did not<br/> 24 specifically consider, as part of your</p>                  |

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| <p style="text-align: right;">Page 334</p> <p>1 analysis, whether or not a particular<br/>                 2 pharmacy was located near a long-term<br/>                 3 care facility or a major hospital,<br/>                 4 correct?<br/>                 5 A. Correct.<br/>                 6 Q. In applying any of the<br/>                 7 metrics or approaches that you set forth<br/>                 8 in your report, did you take into<br/>                 9 account, with respect to any particular<br/>                 10 pharmacy, the percentage of controlled<br/>                 11 substances ordered by that pharmacy<br/>                 12 relative to the pharmacy's total orders<br/>                 13 of all prescription medications?<br/>                 14 A. No. That's an example of<br/>                 15 the data I was alluding to a minute ago.<br/>                 16 If it were produced in discovery, it<br/>                 17 might be useful, it might be interesting<br/>                 18 and useful. But my understanding is it's<br/>                 19 not available.<br/>                 20 Q. Setting aside whatever<br/>                 21 discovery issues and your understanding<br/>                 22 of those discovery issues. I just want<br/>                 23 to be clear that you have not, as part of<br/>                 24 your approach in this case, and</p>               | <p style="text-align: right;">Page 336</p> <p>1 correct?<br/>                 2 A. Correct.<br/>                 3 Q. As part of your application<br/>                 4 of the approaches that are set forth in<br/>                 5 your report in this lawsuit, did you take<br/>                 6 into account specifically any changes in<br/>                 7 recommended prescribing practices in the<br/>                 8 medical community for the use of<br/>                 9 prescription opioids?<br/>                 10 A. Not except indirectly,<br/>                 11 perhaps, in Section 10.<br/>                 12 Q. I just want to know<br/>                 13 specifically if you, as part of your<br/>                 14 application of these approaches you took<br/>                 15 into account or not, any changes in<br/>                 16 recommended prescribing practices for the<br/>                 17 use of prescription opioid medications?<br/>                 18 A. Not directly, if by that you<br/>                 19 mean on such and such a date there's a<br/>                 20 change in guidance, do I, on that date,<br/>                 21 change something in my analysis. The<br/>                 22 answer is no.<br/>                 23 Indirectly, any changes in<br/>                 24 guidance are affecting the results in 9</p>  |
| <p style="text-align: right;">Page 335</p> <p>1 application of these metrics, taken that<br/>                 2 information into account, correct?<br/>                 3 A. The information is not<br/>                 4 available to me. If it were, as I said,<br/>                 5 it might make for some interesting<br/>                 6 analysis. So I haven't taken into<br/>                 7 account any information that's not<br/>                 8 available to me.<br/>                 9 Q. So that's a -- that's a no,<br/>                 10 you did not take that into account,<br/>                 11 right? Let me --<br/>                 12 A. With an explanation, yes.<br/>                 13 Q. Let me -- let me clean it<br/>                 14 up. Right, I get the explanation. So<br/>                 15 that's on the record.<br/>                 16 But my basic question to you<br/>                 17 is, just to be clear, in applying the<br/>                 18 metrics and approaches that are set forth<br/>                 19 in your report for flagging orders, you<br/>                 20 did not take into account with respect to<br/>                 21 any individual pharmacy the percentage of<br/>                 22 controlled substances ordered by that<br/>                 23 pharmacy relative to the pharmacy's total<br/>                 24 orders of all prescription medications,</p> | <p style="text-align: right;">Page 337</p> <p>1 and 10 -- Section 9 and 10, but there's<br/>                 2 no direct application of that<br/>                 3 hypothetical change in guidance on a<br/>                 4 calculation that the algorithm is run.<br/>                 5 Q. Is it fair to say that the<br/>                 6 algorithm that you and your team were<br/>                 7 running for purposes of applying the five<br/>                 8 approaches to flagging orders did not<br/>                 9 take into account -- there was nothing in<br/>                 10 the algorithm that took into account any<br/>                 11 changes to recommendations about<br/>                 12 prescribing practices of prescription<br/>                 13 opioid medications?<br/>                 14 A. I don't think that's<br/>                 15 completely accurate. I think that's --<br/>                 16 Q. And I'll pause you there.<br/>                 17 And will you please explain, if you can,<br/>                 18 what specifically in the actual algorithm<br/>                 19 that you and your team applied, with<br/>                 20 respect to any of the five approaches,<br/>                 21 that directly took into account changes<br/>                 22 over time in recommended prescribing<br/>                 23 practices for the use of prescription<br/>                 24 opioid medications?</p> |

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| <p style="text-align: right;">Page 338</p> <p>1 A. Well, in Sections --<br/> 2 algorithms or methods or Approaches 2 and<br/> 3 3 were comparing a pharmacy's shipments<br/> 4 to twice or three times the trailing<br/> 5 12-month average to other pharmacies<br/> 6 serviced by the same distributor. And so<br/> 7 to the extent changes in guidance affects<br/> 8 prescribing behavior, increasing it or<br/> 9 decreasing it, that shows up in the<br/> 10 national averages, and so has some impact<br/> 11 on Method 2 and Method 3.<br/> 12 Q. To what extent did your<br/> 13 application of the algorithms that you<br/> 14 set forth in your report measure, if at<br/> 15 all, the impact that changes in<br/> 16 prescribing guidelines over time had on<br/> 17 the application of your approaches?<br/> 18 A. They don't do that.<br/> 19 Q. They don't do that?<br/> 20 A. Correct.<br/> 21 Q. Your algorithms are not set<br/> 22 up to measure in any way how changes in<br/> 23 prescribing guidelines affected the<br/> 24 flagged orders pursuant to the methods</p> | <p style="text-align: right;">Page 340</p> <p>1 A. No.<br/> 2 Q. I just wanted to make sure I<br/> 3 understood this very clearly. Are you in<br/> 4 any way relying on the opinions of, or<br/> 5 information from any consultants or<br/> 6 experts that the lawyers have retained in<br/> 7 this litigation for purposes of informing<br/> 8 your own opinions and your own report?<br/> 9 A. No.<br/> 10 Q. There were a couple of<br/> 11 questions earlier today about diversion.<br/> 12 A. Yes.<br/> 13 Q. Do you remember that?<br/> 14 I just wanted to make sure I<br/> 15 understood, that you do not have any<br/> 16 opinions about the physical security that<br/> 17 any distributor uses or has used to<br/> 18 prevent diversion of controlled<br/> 19 substances including prescription opioid<br/> 20 medications, true?<br/> 21 A. True.<br/> 22 Q. And you have not identified<br/> 23 any specific instances of diversion based<br/> 24 on your review of any of the materials</p>           |
| <p style="text-align: right;">Page 339</p> <p>1 you're espousing in your report, fair?<br/> 2 A. Correct. I don't know about<br/> 3 espousing, but presenting. I'm not<br/> 4 advocating for one or the other.<br/> 5 Q. That's a fair clarification.<br/> 6 There was a reference<br/> 7 earlier today about DEA annual quotas.<br/> 8 Do you remember a couple of questions<br/> 9 about DEA quotas?<br/> 10 A. Yes.<br/> 11 Q. Are you familiar with how<br/> 12 DEA quotas for prescription opioid<br/> 13 medications are set?<br/> 14 A. No.<br/> 15 Q. Do you know the extent to<br/> 16 which annual quotas set by the DEA for<br/> 17 the use of prescription opioid<br/> 18 medications has varied over time?<br/> 19 A. No.<br/> 20 Q. Do you have any knowledge<br/> 21 about the ways in which guidelines to the<br/> 22 medical community for the appropriate use<br/> 23 of prescription opioid medications has<br/> 24 changed over time?</p>   | <p style="text-align: right;">Page 341</p> <p>1 that you've looked at in this lawsuit,<br/> 2 correct?<br/> 3 A. Correct. I haven't made any<br/> 4 attempt to do that.<br/> 5 Q. One of the things that I<br/> 6 understand you did, pursuant to the<br/> 7 lawyers' request, was to compare<br/> 8 individual defendants' transactional data<br/> 9 with the information that you saw in the<br/> 10 DEA's ARCOS database; is that right?<br/> 11 A. Yes.<br/> 12 Q. You tried to match it up?<br/> 13 A. Yes.<br/> 14 Q. And in Cardinal's case, you<br/> 15 concluded that the match had nearly<br/> 16 perfect overlap. Do you remember writing<br/> 17 that in your report?<br/> 18 A. With the two exceptions that<br/> 19 I identified in the report specifically<br/> 20 for Cardinal. So maybe that wording<br/> 21 isn't particularly good, because where<br/> 22 they do not overlap is biggest for<br/> 23 Cardinal Health compared to any of the<br/> 24 other defendants. You've got the 610,000</p> |

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| <p style="text-align: right;">Page 342</p> <p>1 duplicates for Cardinal Health, and then<br/>2 you've got three weeks where there are no<br/>3 transactions at all in Cuyahoga and<br/>4 Summit for Cardinal Health.<br/>5 So separating those two<br/>6 periods, the rest of the data lines up<br/>7 really well for Cardinal.<br/>8 Q. You're referring to an<br/>9 exception in the data from March 2008?<br/>10 Is that what you're talking about?<br/>11 A. That's part of it.<br/>12 Q. Well, you write on Page 34<br/>13 of your report -- is that where you're<br/>14 looking right now?<br/>15 A. Yes.<br/>16 Q. You wrote, "Virtually all of<br/>17 the transactions in Cardinal Health's<br/>18 data and the transactions in the ARCOS<br/>19 data match, with the exception of<br/>20 March 2008."<br/>21 Do you see that?<br/>22 A. Yes.<br/>23 Q. Did I read that correctly?<br/>24 A. Correct. But you have to</p>                             | <p style="text-align: right;">Page 344</p> <p>1 Q. What paragraph in your<br/>2 report are you referring to?<br/>3 A. I'm -- I'm looking for it.<br/>4 Bear with me a minute, please.<br/>5 So if you look at Paragraph<br/>6 55 on Page 20, it says, "I removed seven<br/>7 types of transactions from the ARCOS data<br/>8 before conducting further analysis."<br/>9 The first one there is,<br/>10 "Obvious duplicate transactions when the<br/>11 same transaction was reported to ARCOS<br/>12 more than once by the same registrant."<br/>13 And what I'm referring to<br/>14 there is itemized in part in<br/>15 Appendix 2 -- yeah, I'm sorry. Yeah, you<br/>16 can see in the next paragraph, 56, it<br/>17 says, "Appendix 2 provides a detailed<br/>18 explanation of these exclusions and<br/>19 corrections." And when you then look at<br/>20 Appendix 2, I think the first item is<br/>21 610,000 Cardinal Health transactions, by<br/>22 far the biggest correction or exclusion<br/>23 is those --<br/>24 Q. When you say correction or</p>                     |
| <p style="text-align: right;">Page 343</p> <p>1 read it in the context of an earlier<br/>2 paragraph referring to Cardinal Health.<br/>3 You have to read the two of the<br/>4 paragraphs together.<br/>5 Q. And then you say, "Otherwise<br/>6 there was nearly perfect overlap of the<br/>7 ARCOS data and the Cardinal Health<br/>8 transaction data."<br/>9 Do you see that?<br/>10 A. Yes, with the same<br/>11 qualification. You have to read an<br/>12 earlier paragraph with this paragraph.<br/>13 You can't read it in isolation.<br/>14 Q. What other paragraph are you<br/>15 referring to?<br/>16 A. It's whatever paragraph<br/>17 refers to Appendix 2. I don't have the<br/>18 appendix in this spiral-bound package<br/>19 that was handed to me at the beginning.<br/>20 Q. Is there another paragraph<br/>21 in your report that you think would<br/>22 direct us to Appendix A that's relevant<br/>23 to my question?<br/>24 A. Yes.</p> | <p style="text-align: right;">Page 345</p> <p>1 exclusion, are you -- are you saying<br/>2 Cardinal reported that information once<br/>3 and then reported it to the DEA again?<br/>4 A. As many as 13 times, the<br/>5 same transaction 13 times. Or at<br/>6 least --<br/>7 Q. You're not suggesting that<br/>8 Cardinal didn't provide that information<br/>9 to DEA, are you?<br/>10 A. No, I'm saying that -- that<br/>11 it was produced -- sometimes it appears<br/>12 that the same transaction is produced up<br/>13 to 39 times by Cardinal Health, or at<br/>14 least as we get the data from the DEA --<br/>15 I made that qualification earlier. I<br/>16 don't know what Cardinal Health produced<br/>17 to the DEA, submitted to the DEA through<br/>18 ARCOS. I know what the DEA gave me that<br/>19 is attributed to Cardinal Health. And<br/>20 there is 610,000 Cardinal Health<br/>21 transactions that are reported as many as<br/>22 39 times, the same transaction.<br/>23 Q. When you say as many as 39<br/>24 times, that -- that could be anywhere</p> |

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| <p style="text-align: right;">Page 346</p> <p>1 between one and 39. Do you have an<br/>                 2 actual opinion about how many times you<br/>                 3 think it was reported?<br/>                 4 A. Yeah, it's really<br/>                 5 interesting. What you observe --<br/>                 6 Q. No, I just -- I just have a<br/>                 7 specific question. Do you know, between<br/>                 8 the number of one and 39, how many times<br/>                 9 you think Cardinal Health provided that<br/>                 10 information to the United States Drug<br/>                 11 Enforcement Agency?<br/>                 12 MR. MOUGEY: Craig, is it<br/>                 13 listed in Exhibit 2?<br/>                 14 THE WITNESS: The complete<br/>                 15 explanation is not in Appendix 2,<br/>                 16 but we observe --<br/>                 17 BY MR. BOEHM:<br/>                 18 Q. Could -- could you answer my<br/>                 19 question and then maybe we could --<br/>                 20 A. All right.<br/>                 21 Q. -- follow-up, if I have more<br/>                 22 questions I need to hear about.<br/>                 23 A. Sure. I'm trying to, but if<br/>                 24 you ask it again, I'll be more succinct.</p>   | <p style="text-align: right;">Page 348</p> <p>1 But I'm saying it my way on<br/>                 2 purpose, because that's what I'm<br/>                 3 interested in hearing about. I don't<br/>                 4 want you to flip it from one to 39 and<br/>                 5 then 610. Because you flipped it from up<br/>                 6 to 39 and then you said 610. So I just<br/>                 7 want to ask it the way I'm asking it.<br/>                 8 A. Well, the record is going to<br/>                 9 be confusing, but okay. Ask it again and<br/>                 10 I'll try to answer it the way you're<br/>                 11 asking it.<br/>                 12 Q. Okay. You say that on<br/>                 13 Page 20 of your report, you make<br/>                 14 reference to transactions that may have<br/>                 15 been reported to the United States Drug<br/>                 16 Enforcement Agency on more than one<br/>                 17 occasion, right?<br/>                 18 A. No. That's not what I'm<br/>                 19 referring to.<br/>                 20 Q. Okay. What do you mean when<br/>                 21 you say duplicate transactions that are<br/>                 22 reported to ARCOS?<br/>                 23 A. Not on more than one<br/>                 24 occasion. On the same day, the same</p>   |
| <p style="text-align: right;">Page 347</p> <p>1 Q. Sure. You said up to 39<br/>                 2 times. So my question to you is, do you<br/>                 3 know how many times Cardinal Health<br/>                 4 provided to the United States Drug<br/>                 5 Enforcement Agency these data that you<br/>                 6 believe may have been, although you are<br/>                 7 not certain, provided to the DEA more<br/>                 8 than one time?<br/>                 9 A. Two parts, but the answer is<br/>                 10 yes.<br/>                 11 Q. How many times?<br/>                 12 A. 610,000 times.<br/>                 13 Q. Okay. So your testimony is<br/>                 14 that -- and -- and what package of data<br/>                 15 are you referring to when you say that<br/>                 16 Cardinal provided the same data 610<br/>                 17 times?<br/>                 18 A. You're saying it differently<br/>                 19 than I am.<br/>                 20 Q. I'm saying it the way I'm<br/>                 21 saying it, and that's how I want you to<br/>                 22 hear it and answer it. So if you have<br/>                 23 a -- maybe -- maybe Peter later can<br/>                 24 clarify if he feels like he needs to.</p> | <p style="text-align: right;">Page 349</p> <p>1 transaction reported up to 13 times --<br/>                 2 exactly the same transaction reported up<br/>                 3 to 13 times in single increments. One<br/>                 4 time, two times, three times, four times,<br/>                 5 five times, up to 13 times.<br/>                 6 And then it jumps to being<br/>                 7 in even numbers. So 14, 16, 18, 20, 22,<br/>                 8 24, 26. And then it jumps to 39.<br/>                 9 And that's how many times<br/>                 10 the identical transaction is reported,<br/>                 11 and it's from a single Cardinal Health<br/>                 12 facility.<br/>                 13 Q. Is it a single transaction<br/>                 14 that's being reported multiple times?<br/>                 15 A. Yes. That's how we<br/>                 16 interpret it. And it's not happening --<br/>                 17 it's not a single transaction. It's tens<br/>                 18 of thousands of transactions by this one<br/>                 19 DEA number being reported up to 39 times.<br/>                 20 Q. Do you know as you sit here<br/>                 21 today whether or not whatever it is<br/>                 22 you're seeing in the ARCOS database is<br/>                 23 attributable to the nature of the reports<br/>                 24 made by Cardinal Health as opposed to</p> |



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1 something on the DEA's end of storing  
2 those data?  
3 A. No, I tried to make that  
4 clear earlier. I do not -- I can't  
5 distinguish between those two.  
6 Q. You don't know. But in any  
7 event, you are not suggesting that with  
8 respect to the transactions you're  
9 referring to now that they were in some  
10 way withheld from the DEA, correct?  
11 A. No. If anything, the  
12 opposite.  
13 Q. Now, going back to the  
14 portion of your report where you say that  
15 Cardinal's reporting had nearly perfect  
16 overlap --  
17 A. Yes.  
18 Q. -- with what you found in  
19 the ARCOS database.  
20 You remember that, right?  
21 A. Correct.  
22 Q. And indeed, you said in your  
23 report that over 99.9 percent of  
24 Cardinal's transactional data was a match

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1 with what you found in the DEA's ARCOS  
2 database. Do you remember that?  
3 A. I'm sorry, could you refer  
4 me to the page and paragraph, please?  
5 Q. Sure. Happy to.  
6 If you look at Page 32, you  
7 have a table. I believe it's Table 14?  
8 A. Yes.  
9 Q. And you have in this table  
10 identified several distributors, correct?  
11 A. Correct.  
12 Q. And the first one you list  
13 is Cardinal Health.  
14 Do you see that?  
15 A. Yes.  
16 Q. And in that first set of  
17 columns, you've written transactions that  
18 are in both datasets.  
19 Do you see that?  
20 A. Yes.  
21 Q. And I understand that to  
22 mean that you're trying to calculate a  
23 percentage of transactional data that  
24 matches up perfectly with what you find

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1 in ARCOS, right?  
2 A. Correct.  
3 Q. And in the case of Cardinal  
4 Health, you determined that 99.9 percent  
5 of the transactional data matched up  
6 perfectly with what you found in ARCOS,  
7 right?  
8 A. After excluding the known  
9 non-overlaps, just as it says in the  
10 title, that's correct.  
11 Q. Is it typical for you, when  
12 you're reviewing very large datasets and  
13 comparing maybe kind of corresponding  
14 large datasets, to find small  
15 discrepancies here and there?  
16 A. Yes.  
17 Q. Now, as I understand it, and  
18 please do correct me if I've  
19 misunderstood something, the ARCOS data  
20 that you used for purposes of your  
21 analyses as -- as set forth in your  
22 report covered January 2006 through  
23 December 2014; is that right?  
24 A. Yes.

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1 Q. But you did not necessarily  
2 limit your review of the distributors'  
3 transactional data to that same period of  
4 time, right?  
5 A. Correct.  
6 Q. As I understand it, the  
7 period of years for the transactional  
8 data you reviewed varied distributor by  
9 distributor, right?  
10 A. Correct.  
11 Q. For some of the distributors  
12 you used transactional data that went  
13 many years before 2006, right?  
14 A. Yes.  
15 Q. And for some you didn't  
16 review any transactional data prior to  
17 2006, right?  
18 A. Correct.  
19 Q. Do you recall that for  
20 Cardinal the transactional data you  
21 looked at went back to 1996?  
22 A. Yes, '96 or '97. I forget  
23 as I sit here. But back into the mid  
24 1990s.

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| <p style="text-align: right;">Page 354</p> <p>1 Q. And, in fact, the data that<br/> 2 you looked at for Cardinal went back<br/> 3 farther in time than the data that you<br/> 4 had for any other defendant, right?<br/> 5 A. Yes.<br/> 6 Q. Earlier today you've given<br/> 7 testimony and it's set forth in your<br/> 8 report, that whenever one of your methods<br/> 9 flagged a transaction, then you would<br/> 10 flag every subsequent transaction from<br/> 11 that date going forward, correct?<br/> 12 A. Yes.<br/> 13 Q. And that flagging for<br/> 14 subsequent transactions was automatic,<br/> 15 right?<br/> 16 A. Yes.<br/> 17 Q. In other words, you didn't<br/> 18 do any further analysis of the subsequent<br/> 19 transactions to measure them in any way.<br/> 20 They were automatically flagged, right?<br/> 21 A. Yes.<br/> 22 Q. Given your use of this "flag<br/> 23 every subsequent transaction" approach,<br/> 24 the question of how far back in time</p>  | <p style="text-align: right;">Page 356</p> <p>1 methodologies, you are going to end up<br/> 2 flagging more transactions, right?<br/> 3 A. Again, it's a little bit<br/> 4 more complicated, because it depends on<br/> 5 the pharmacy turnover, you know, how long<br/> 6 the relationship lasts between a<br/> 7 distributor and a pharmacy. And it<br/> 8 depends on the general trend, up or down,<br/> 9 in the data. But in this application, I<br/> 10 think in general what you're saying is<br/> 11 correct.<br/> 12 Q. And why is what -- to<br/> 13 anybody who may not be in the weeds of<br/> 14 this as much as we are, explain why what<br/> 15 I'm saying in general is correct?<br/> 16 A. Well, as I've presented the<br/> 17 stylized fact, the amount of prescription<br/> 18 opioids increases significantly from 1997<br/> 19 to 2010 or '11. We saw that in Section<br/> 20 10 of my report.<br/> 21 And if Cardinal Health, for<br/> 22 instance, and some other distributor,<br/> 23 Distributor B, both were shipping from<br/> 24 1997, but for some reason Distributor B</p> |
| <p style="text-align: right;">Page 355</p> <p>1 you're looking at a particular<br/> 2 distributor's transactional data could<br/> 3 have significant implications in terms of<br/> 4 the total numbers of orders that are<br/> 5 getting flagged under your methodologies,<br/> 6 correct?<br/> 7 A. It's a little bit more<br/> 8 subtle than that. But I agree with the<br/> 9 general implication, yes, that the<br/> 10 further back in time you go, if there's a<br/> 11 big increase over time in shipments,<br/> 12 you're flagging more orders for the<br/> 13 distributors that you go back further in<br/> 14 time with.<br/> 15 Q. So if you're going back in<br/> 16 time all the way to 1996 for one<br/> 17 distributor, but you're only going back<br/> 18 in time to 2004 or 2005 or 2006 for<br/> 19 another distributor, you would expect<br/> 20 that under your approach where you're<br/> 21 flagging everything subsequent to a first<br/> 22 flagged transaction, that for the<br/> 23 distributor where you are going back<br/> 24 farther in time, under your</p> | <p style="text-align: right;">Page 357</p> <p>1 only produced data from 2002 in<br/> 2 discovery, we would start observing<br/> 3 Distributor B's data at a higher level<br/> 4 than the levels we first were observing<br/> 5 Cardinal Health's shipments.<br/> 6 And so the Cardinal Health<br/> 7 shipments obviously before the<br/> 8 Distributor B's data is produced, none of<br/> 9 those get flagged, because there is no<br/> 10 data produced by Distributor B; whereas,<br/> 11 given my stylized hypothetical, a bunch<br/> 12 of the Cardinal Health shipments may be<br/> 13 flagged.<br/> 14 And then separate and apart<br/> 15 from that, because some of these<br/> 16 thresholds, at least with respect to the<br/> 17 first -- it doesn't have any impact on<br/> 18 two, three, four or five, I don't think.<br/> 19 But with respect to the first one, the<br/> 20 relationship, the first six months for<br/> 21 Cardinal Health and a pharmacy, is at a<br/> 22 lower level. And so more of the<br/> 23 subsequent orders get flagged.<br/> 24 Q. So it's fair to say that</p>  |

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1 when you're doing it in the way you did  
2 it, with the data that you had to look  
3 at, these methodologies are going to  
4 create inevitable discordance or  
5 discrepancies in terms of how they get  
6 applied to different distributors  
7 depending on how far back in time you  
8 looked at each distributor's  
9 transactional data, correct?  
10 A. Well, it may or may not. If  
11 you have a distributor that comes on  
12 board shipping for the first time in 2002  
13 in my example, I think it would be not a  
14 data issue. But you could imagine what  
15 would be a purely data issue, one  
16 defendant not -- one distributor not  
17 producing earlier data would change the  
18 results. It would understate the -- at  
19 least under the first methodology, the  
20 number of orders that ought to be flagged  
21 by -- for that distributor.  
22 Q. In your view, does the fact  
23 that there are these inevitable  
24 discrepancies as between application of

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1 your various approaches to different  
2 distributors represent a methodological  
3 flaw in the approach that you've  
4 undertaken?  
5 A. No, not at all.  
6 Q. At a minimum, your  
7 methodology results in very different  
8 application of those approaches to  
9 different distributors, depending on how  
10 far back in time you look back at any  
11 given distributor's transactional data,  
12 correct?  
13 A. No, I don't think that's a  
14 correct characterization.  
15 Q. Why not?  
16 A. Because what matter --  
17 Q. You just -- you just said  
18 Mr. McCann, that if you start in 1996 and  
19 you flag that first order -- let's say in  
20 January of 1996, you flag an order,  
21 right? Can I create that --  
22 A. Yes.  
23 Q. -- scenario for you?  
24 A. Yes.

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1 Q. Under your approach, all of  
2 your approaches, every subsequent order  
3 is going to get flagged, right?  
4 A. Correct.  
5 Q. Okay. And if you're  
6 comparing that to a distributor where  
7 you're not even looking at data until  
8 2004 or 2005, you've got eight or  
9 nine years where you're not even  
10 performing an analysis, so there's no  
11 opportunity for any of those to get  
12 flagged under the very same methodology,  
13 right?  
14 A. No. You're completely  
15 mischaracterizing the application. The  
16 application --  
17 Q. How would you apply --  
18 MR. MOUGEY: Paul, that's  
19 the second time you've interrupted  
20 him.  
21 MR. BOEHM: Okay. No,  
22 sorry. Sure.  
23 MR. MOUGEY: I just want to  
24 make sure that's the term.

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1 MR. BOEHM: Fair. Fair.  
2 Okay. Go ahead. I apologize.  
3 THE WITNESS: If you have a  
4 defendant that only starts  
5 shipping opioids in 2002, and you  
6 have a defendant that started  
7 shipping opioids in 1997, you will  
8 get different results because you  
9 have a different threshold for  
10 that defendant that starts  
11 shipping later. In some sense --  
12 BY MR. BOEHM:  
13 Q. But I'm not asking -- just  
14 to be clear, my question wasn't about  
15 when the shipping begins.  
16 A. But in your question you're  
17 assuming that I have data that I'm not  
18 looking at. You keep saying --  
19 Q. I'm not assuming that at  
20 all. So let me back up and explain that  
21 to you because if that's -- that may be  
22 our point of confusion.  
23 I'm not asking you to talk  
24 one way or another about, you know, what

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| <p style="text-align: right;">Page 362</p> <p>1 you personally have access to. I'm just<br/> 2 asking you about the actual application,<br/> 3 like the actual nuts and bolts. You<br/> 4 talked about you being a computer. So<br/> 5 I'm talking about the technical<br/> 6 application, based on whatever you have<br/> 7 or you don't have.<br/> 8       You are going to have a<br/> 9 discrepancy when you have eight or nine<br/> 10 more years of data for one distributor<br/> 11 versus another distributor where you<br/> 12 don't have those same years of data, for<br/> 13 whatever reason or you haven't looked at<br/> 14 it or you don't have it, whatever the<br/> 15 reason is, you haven't looked at it,<br/> 16 there is a difference, right?<br/> 17       MR. MOUGEY: Objection.<br/> 18       THE WITNESS: That's a<br/> 19 difference in the data. In your<br/> 20 example, there's eight or<br/> 21 nine years of data for the<br/> 22 defendant that there isn't for the<br/> 23 other. And so you apply the same<br/> 24 algorithm to those two datasets,</p> | <p style="text-align: right;">Page 364</p> <p>1       apply this methodology to data<br/> 2 from 1997 forward and compare that<br/> 3 to exactly the same defendant but<br/> 4 only apply it from 2004 forward,<br/> 5 you get different results, of<br/> 6 course, because you're applying it<br/> 7 to different data.<br/> 8 BY MR. BOEHM:<br/> 9       Q. Right. And there's more<br/> 10 opportunity for you to flag more orders<br/> 11 earlier on --<br/> 12       (Telephonic interruption.)<br/> 13 BY MR. BOEHM:<br/> 14       Q. -- because of the assumption<br/> 15 that you've made -- actually, it's an<br/> 16 instruction that you received from<br/> 17 plaintiffs' lawyers, to assume that every<br/> 18 subsequent order ought to be flagged as<br/> 19 well, right?<br/> 20       A. No. I wouldn't say that<br/> 21 it's more opportunity to flag orders.<br/> 22       There's just more orders.<br/> 23 There's more data in your hypothetical.<br/> 24 You've got five or six more years of</p>   |
| <p style="text-align: right;">Page 363</p> <p>1       you get different results because<br/> 2 it's different data. Not because<br/> 3 there's a discordance or an<br/> 4 inconsistency. I don't<br/> 5 understand.<br/> 6 BY MR. BOEHM:<br/> 7       Q. Well, you get different data<br/> 8 because you're looking at some of the<br/> 9 data, and either because you don't have<br/> 10 it or you chose not to, whatever the<br/> 11 reason, you're not looking at data for<br/> 12 another distributor, right? So there's<br/> 13 naturally going to be a difference when<br/> 14 you are using a carry-it-forward flagging<br/> 15 approach, correct?<br/> 16       MR. MOUGEY: Objection.<br/> 17       THE WITNESS: You just snuck<br/> 18 back -- I didn't mean that as a<br/> 19 pejorative. But you've just<br/> 20 brought in -- back into your<br/> 21 question that there's data or<br/> 22 there may be data that I don't<br/> 23 have or that I'm not looking at.<br/> 24       What I'm saying is if you</p>   | <p style="text-align: right;">Page 365</p> <p>1 data. And since the orders get flagged<br/> 2 in some sense earlier rather than later,<br/> 3 you -- you are picking up years of data<br/> 4 that are being flagged, especially --<br/> 5 partly because the trend is up.<br/> 6       If the trend was down in<br/> 7 opioid consumption, what we are talking<br/> 8 about wouldn't occur at all. It's the<br/> 9 fact that there's a significant upward<br/> 10 trend in Cardinal Health's data and other<br/> 11 firm's data that is creating that result.<br/> 12       Q. If you were to mis-identify<br/> 13 or mistakenly flag an order or a<br/> 14 transaction earlier in time, the<br/> 15 implications of that mistake would be<br/> 16 even greater under your methodology<br/> 17 because every subsequent order also gets<br/> 18 flagged, fair?<br/> 19       MR. MOUGEY: Objection.<br/> 20       THE WITNESS: I don't<br/> 21 understand that question. If you<br/> 22 can --<br/> 23 BY MR. BOEHM:<br/> 24       Q. Sure. Let me say it again.</p> |

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1 If you don't understand, I'm happy to say  
2 it again.  
3 If you mis-identify or  
4 mistakenly flag a transaction earlier in  
5 time, that has greater implications for  
6 more error because of the subsequent  
7 flagging that automatically takes place  
8 under your methodologies, correct?  
9 MR. MOUGEY: Objection.  
10 THE WITNESS: Greater than  
11 what? The sentence is --  
12 BY MR. BOEHM:  
13 Q. Greater than later. Greater  
14 than later in time.  
15 The earlier you make a  
16 mistake, the bigger the implications in  
17 terms of that error spreading throughout  
18 your analysis, right?  
19 A. Maybe, maybe not. I'd have  
20 to think about it.  
21 Q. Well, when you identify an  
22 order as flagged under your methodology,  
23 would it be fair to say it's like you're  
24 knocking over a domino, and every domino

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1 that follows along that chain gets  
2 flagged, right?  
3 A. Correct.  
4 Q. So if you knock it over at  
5 the very beginning, you are going to  
6 knock over more dominoes than if you walk  
7 up to the middle of the domino row and  
8 knock it over from there, right?  
9 A. Well, I like the analogy. I  
10 just have to think through it a little  
11 bit to see if it -- if it applies  
12 precisely. But in general, I think what  
13 you're saying is correct.  
14 Q. So if you make a mistake  
15 early on and knock over that domino, you  
16 are going to mistakenly knock over more  
17 dominoes that you didn't mean to knock  
18 over, right?  
19 A. I'm not sure that you are  
20 correct in -- in all instances. I'd have  
21 to think through it a little bit more.  
22 But in general I agree that  
23 the earlier the data you have, whenever  
24 you first trigger, flag an order, you are

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1 going to be flagging more orders than if  
2 you had data that started later. And if  
3 it turned out that there was some  
4 disagreement about, for instance, whether  
5 that order should have been flagged or  
6 maybe was cleared as a result of some due  
7 diligence, the fact that you are assuming  
8 no due diligence with data that goes back  
9 earlier would have a bigger impact maybe,  
10 maybe, maybe not, but maybe, than if the  
11 data started a few years later.  
12 Q. Starting on Page 72 of your  
13 report you apply an approach that you  
14 referred to as the "maximum daily dosage  
15 units approach." Do you remember that?  
16 A. Yes.  
17 Q. Did you come up with that  
18 name, or was that something that the  
19 lawyers or your staff came up with?  
20 A. I came up with it.  
21 Q. Okay. How did you arrive at  
22 that name?  
23 A. Well, I thought it was an  
24 accurate description of the source

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1 document, and separate and apart from  
2 whether it's the -- accurate description  
3 of the source document, it's an accurate  
4 description of the approach, of the  
5 algorithm.  
6 What I was trying, with the  
7 names that I put on each of these five,  
8 is to accurately describe in shorthand,  
9 anyway, what the approach was, to have  
10 the title be descriptive of what we're  
11 actually implementing. And what we're  
12 implementing here is a maximum daily  
13 threshold in dosage units. And that's  
14 why I call it maximum daily dosage units.  
15 Q. Okay. Well, you kind of  
16 talked about two things. You first  
17 talked about the source document, and  
18 then you talked about your approach.  
19 Let's see if we can break those up into  
20 two separate conversations. Does that  
21 work?  
22 A. Sure.  
23 Q. Okay. I think earlier today  
24 you referred to the -- the -- what you



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| <p style="text-align: right;">Page 370</p> <p>1 just now called a source document for<br/> 2 this approach as a two-page document. Do<br/> 3 you remember that?<br/> 4 A. Yes.<br/> 5 Q. And I think what you meant<br/> 6 by that is that the lawyers who hired you<br/> 7 for this case only gave you two pages to<br/> 8 look at for purposes of this methodology;<br/> 9 is that right?<br/> 10 A. No. I meant it as I said<br/> 11 it. I don't know whether I received more<br/> 12 than two pages or exactly two pages.<br/> 13 Q. Why did you call it a<br/> 14 two-page document?<br/> 15 A. Because that's how I<br/> 16 visualize it. That's how I recall seeing<br/> 17 it.<br/> 18 Q. You don't recall seeing<br/> 19 anything more than two pages?<br/> 20 A. Not in connection with that<br/> 21 document, no.<br/> 22 (Document marked for<br/> 23 identification as Exhibit<br/> 24 McCann-10.)</p>  | <p style="text-align: right;">Page 372</p> <p>1 description of the algorithm that<br/> 2 I implemented. And what I<br/> 3 implemented was a maximum daily<br/> 4 dosage unit threshold.<br/> 5 BY MR. BOEHM:<br/> 6 Q. Okay. My colleagues have<br/> 7 corrected me. So let me just for the<br/> 8 record say that Exhibit P is on -- as<br/> 9 printed on the document is on the<br/> 10 original. Y'all didn't have that?<br/> 11 A. Yeah, I was going to say I<br/> 12 don't recall attaching it as Exhibit P.<br/> 13 I referenced it in a footnote, but I<br/> 14 don't recall attaching it.<br/> 15 Q. Yeah, that's what --<br/> 16 correct. You got it right. I apologize<br/> 17 for that. It's a reference in<br/> 18 Footnote 55 of your report by Bates<br/> 19 number.<br/> 20 A. Yes.<br/> 21 Q. Are these the two pages,<br/> 22 that are now marked as Exhibit 10, are<br/> 23 these the two pages that you had in mind?<br/> 24 A. Yes.</p>                           |
| <p style="text-align: right;">Page 371</p> <p>1 BY MR. BOEHM:<br/> 2 Q. I've marked a document that<br/> 3 I'm handing you as Exhibit 10 for<br/> 4 purposes of your deposition. It's, I<br/> 5 think, Exhibit P to your report if I<br/> 6 understand the markings on this page<br/> 7 correctly.<br/> 8 Do you see that?<br/> 9 A. Yes.<br/> 10 Q. Is Exhibit P the two-page<br/> 11 document that you referred to earlier<br/> 12 today in connection with the so-called<br/> 13 maximum daily dosage units approach?<br/> 14 A. Yes.<br/> 15 Q. You said you called it the<br/> 16 maximum daily dosage units approach based<br/> 17 on something that you saw in the<br/> 18 document, these two pages, right?<br/> 19 MR. MOUGEY: Objection.<br/> 20 THE WITNESS: Well, no, I<br/> 21 think what I said was that, as I<br/> 22 was answering your question, I<br/> 23 first said it was something I saw<br/> 24 on the document, or rather it is a</p> | <p style="text-align: right;">Page 373</p> <p>1 Q. Is there anything from the<br/> 2 document itself that informed your<br/> 3 decision to refer to this approach as the<br/> 4 maximum daily dosage units approach?<br/> 5 I guess another way, what<br/> 6 I'm really asking you is, do you know how<br/> 7 this document was actually understood and<br/> 8 used during the time that it was in<br/> 9 effect at Cardinal Health?<br/> 10 A. No.<br/> 11 Q. Do you have any knowledge<br/> 12 about whether or not the way you have<br/> 13 applied what you call the maximum daily<br/> 14 dosage unit approach, how that compares<br/> 15 to what Cardinal was or has done in terms<br/> 16 of flagging potentially suspicious<br/> 17 orders?<br/> 18 A. No.<br/> 19 Q. And you don't know how this<br/> 20 document which is now marked as<br/> 21 Exhibit 10 relates to Cardinal Health's<br/> 22 actual efforts to flag transactions,<br/> 23 right?<br/> 24 A. Correct.</p> |

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|--|---|
| <p style="text-align: right;">Page 374</p> <p>1 Q. Do you know when this<br/> 2 document was created?</p> <p>3 A. No.</p> <p>4 Q. Do you know the period of<br/> 5 time when the guidance in this document<br/> 6 was in effect at Cardinal?</p> <p>7 A. No.</p> <p>8 Q. Do you know what the term<br/> 9 "dosage limit" was understood to mean at<br/> 10 Cardinal in the context of this document?</p> <p>11 A. No.</p> <p>12 Q. Do you know how the term<br/> 13 "dosage limit" as used in this document<br/> 14 was implemented in terms of actual<br/> 15 calculations?</p> <p>16 A. No.</p> <p>17 Q. So was it the plaintiffs'<br/> 18 lawyers who told you how to kind of<br/> 19 define the parameters of the maximum<br/> 20 daily dosage units approach?</p> <p>21 A. Well, not precisely, but yes<br/> 22 in general terms, what I was asked to do<br/> 23 was implement an approach based on the<br/> 24 number of dosage units in the column</p>                    | <p style="text-align: right;">Page 376</p> <p>1 based on whether they are accurate or<br/> 2 not. The question is whether they're<br/> 3 useful or not. But I'm not -- I'm not<br/> 4 opining on the assumptions. I'm just<br/> 5 implementing the assumptions.</p> <p>6 Q. You are not vouching in any<br/> 7 way for the accuracy of the assumptions<br/> 8 that you're making for the purposes of<br/> 9 your five approaches, right?</p> <p>10 A. Correct.</p> <p>11 Q. And your calculations in<br/> 12 this lawsuit as set forth in your report,<br/> 13 do not actually involve any application<br/> 14 of alternative sets of assumptions,<br/> 15 correct?</p> <p>16 A. Except across the<br/> 17 applications -- across the approaches,<br/> 18 no. Maybe I misunderstood. It might be<br/> 19 getting a little late.</p> <p>20 Q. Well, it's possible that I<br/> 21 flubbed the question too.</p> <p>22 You said that it would be<br/> 23 possible for you to make different<br/> 24 assumptions, right?</p>                                  |
| <p style="text-align: right;">Page 375</p> <p>1 under retail on this exhibit for the<br/> 2 drugs that are listed here.</p> <p>3 Q. And when you say you were<br/> 4 asked to do that, you mean you were asked<br/> 5 by the lawyers who hired you?</p> <p>6 A. Correct.</p> <p>7 Q. In response to some<br/> 8 questioning earlier today you made a<br/> 9 reference to what I think you called the<br/> 10 flexibility of the model. Do you<br/> 11 remember that?</p> <p>12 A. Yes.</p> <p>13 Q. And I think what you meant<br/> 14 is that it would be possible for you to<br/> 15 make different assumptions than you<br/> 16 actually do in the way you've implemented<br/> 17 these five approaches. Is that fair?</p> <p>18 A. Yes.</p> <p>19 Q. Okay. And you're not<br/> 20 vouching in any way for the accuracy of<br/> 21 your assumptions; you're just<br/> 22 implementing them like a calculator<br/> 23 would, right?</p> <p>24 A. I don't judge assumptions</p> | <p style="text-align: right;">Page 377</p> <p>1 A. Yes.</p> <p>2 Q. And that's what you meant by<br/> 3 flexibility. But your computations and<br/> 4 calculations and analyses in this case as<br/> 5 set forth in your opinions and report<br/> 6 don't actually involve any alternative<br/> 7 assumptions, right?</p> <p>8 A. Except across the -- across<br/> 9 the approaches.</p> <p>10 Q. Just -- just tell me what<br/> 11 you mean by across the approaches.</p> <p>12 A. Well, I've got five<br/> 13 approaches here we've been talking about.<br/> 14 And each of them applies a different set<br/> 15 of rules to flagging orders.</p> <p>16 Q. Oh, yeah. There are<br/> 17 differences between the five approaches.</p> <p>18 A. That's what I meant.</p> <p>19 Q. I get that there are<br/> 20 differences between the five approaches.<br/> 21 But my question to you is, even though<br/> 22 you could make assumptions other than the<br/> 23 ones that you actually are making for<br/> 24 purposes of these five approaches, none</p> |

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1 of your analyses or calculations or  
 2 conclusions actually apply alternative  
 3 sets of assumptions that are not captured  
 4 by your report, right?  
 5 A. Correct.  
 6 MR. BOEHM: Let's go off the  
 7 record for a moment.  
 8 THE VIDEOGRAPHER: Off the  
 9 record at 6:28 p.m.  
 10 (Excused.)  
 11 (Adjourned at approximately  
 12 6:28 p.m.)  
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1  
 2 **CERTIFICATE**  
 3  
 4  
 5 I HEREBY CERTIFY that the  
 6 witness was duly sworn by me and that the  
 7 deposition is a true record of the  
 8 testimony given by the witness.  
 9  
 10 It was requested before  
 11 completion of the deposition that the  
 12 witness, CRAIG J. McCANN, Ph.D., CFA,  
 13 have the opportunity to read and sign the  
 14 deposition transcript.  
 15  
 16 MICHELLE L. GRAY,  
 17 A Registered Professional  
 18 Reporter, Certified Shorthand  
 19 Reporter, Certified Realtime  
 20 Reporter and Notary Public  
 21 Dated: May 9, 2019  
 22  
 23 (The foregoing certification  
 24 of this transcript does not apply to any  
 reproduction of the same by any means,  
 unless under the direct control and/or  
 supervision of the certifying reporter.)

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1 **INSTRUCTIONS TO WITNESS**  
 2  
 3 Please read your deposition  
 4 over carefully and make any necessary  
 5 corrections. You should state the reason  
 6 in the appropriate space on the errata  
 7 sheet for any corrections that are made.  
 8 After doing so, please sign  
 9 the errata sheet and date it.  
 10 You are signing same subject  
 11 to the changes you have noted on the  
 12 errata sheet, which will be attached to  
 13 your deposition.  
 14 It is imperative that you  
 15 return the original errata sheet to the  
 16 deposing attorney within thirty (30) days  
 17 of receipt of the deposition transcript  
 18 by you. If you fail to do so, the  
 19 deposition transcript may be deemed to be  
 20 accurate and may be used in court.  
 21  
 22  
 23  
 24

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 2 **E R R A T A**  
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 4 **PAGE LINE CHANGE**  
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 24 **REASON:** \_\_\_\_\_

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ACKNOWLEDGMENT OF DEPONENT

I, \_\_\_\_\_, do  
hereby certify that I have read the  
foregoing pages, 1 - 383, and that the  
same is a correct transcription of the  
answers given by me to the questions  
therein propounded, except for the  
corrections or changes in form or  
substance, if any, noted in the attached  
Errata Sheet.

\_\_\_\_\_  
CRAIG J. McCANN, Ph.D., CFA      DATE

Subscribed and sworn  
to before me this

\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

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LAWYER'S NOTES

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